

NASA NSIDC DAAC

User Working Group 31

Technical Interchange Meeting

Boulder, CO

October 9-10, 2013



Meeting Minutes provided by: D. Scott, L. Booker, G. Henderson, E. Lenz, and R. Weaver

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Meeting Summary

Meeting Purpose

The User Working Group of the NSIDC DAAC met October 9-10 in Boulder. This was the thirty-first meeting of the group and the first face to face meeting in two years. The meeting goals are stated below and the meeting agenda can be found at: <http://nsidc.org/nasa-daac-uwg/2013/04/agenda-uwg-meeting-31/>

Goals

- Complete the DAAC Data Product Review to ensure that the resources are concentrated on supporting priority Cryosphere data sets.
- Test usability of the first-phase redesigned NSIDC search and identify further improvements.
 - Later phases of development will add advanced tools for refining, exploring, and comparing search results.
- Update the UWG and NASA on NSIDC DAAC data management activities and past action item progress. Collect feedback and guidance on proposed data management activities for prioritization in FY2014.
- Update the UWG on ESDIS and NASA vision for DAAC data, management and science.
- Review the development of DAAC/NSIDC applications that increase data usability and discuss potential use cases and opportunities for future development.

Attendees

UWG Attendees:	Primary NSIDC/CU Attendees:
Mark Anderson	Waleed Abdalati
Chris Derksen (via telecon)	Lisa Booker
Gina Henderson (via telecon/Google hangout)	Erik Jasiak
Jesse Johnson	Erika Lenz
Noah Molotch	Amanda Leon
Axel Schweiger	Donna Scott
Leigh Stearns	Mark Serreze
Nick Steiner	Ron Weaver

NSIDC Developers from all teams attended developer related sessions. NSIDC Technical writers, USO and developers facilitated the Search usability testing. Jane Beitler, Renea Ericson, Dave Gallaher, Deann Miller, Siri Jodha Singh Khalsa, Betsy Sheffield, Steve Tanner attended opening sessions.

UWG Observations and Recommendations

Executive Session Summary 10/10/13

Chair & note taker: Gina R Henderson

Throughout the course of the UWG meeting, 11 action items (AI's) were identified for discussion during the Executive Session held on Thursday Oct 10th.

Below is a summary of the AI's, and the resulting discussion/recommendation from the UWG to NSIDC:

1. NSIDC asked the UWG to consider the value of having a post doc position for supporting science and data management at NSIDC.

UWG: *Do we support idea? Would we be willing to express such support in letter to NASA? If so, what would be included letter?*

UWG Response: *We would rather see any funding be put forth to support a junior scientist as we feel a postdoc might not be the best fit for NSIDC. The amount of time required for a postdoc to get up to speed on datasets/projects versus the length of their possible tenure at NSIDC might prove to be a mismatch. If the potential postdoc would be used as a potential recruiting tool, leading to a possible soft money junior scientist position, rather than a turnover every two years, seems like a better fit for both the candidate in question and the interests of NSIDC.*

AI: *The UWG would be interested in seeing a list of NSIDC scientists and how much/months per year they are supported by the DAAC. It would be useful for future face-to-face meetings to understand which NSIDC scientists are primarily DAAC funded versus outside funds.*

2. Change of 5-yr contract logistics will mean yearly negotiations for funding and no more rolling over money.

UWG: *Should NSIDC keep pushing for an answer of why this is necessary from NASA?*

UWG Response: *How strict is this requirement that does not allow the rolling over of funds? The UWG commented that although it is better practice to do a year-to-year budget, and most funding agencies require this, some leeway in this process is vital to the efficiency of multi year projects. The UWG will help NSIDC in any way with this issue.*

3. Concern over data activities, namely creation of duplicate data sets, has come up.
Ex: Long/Stroeve Tb product vs. the MEaSUREs one.

UWG: Does UWG want to explore near duplication issues? Seems to be a recurring theme at multiple UWG meetings!

UWG Response: This should be done in data acquisition process! However In the case of specific programs, ex. MEaSUREs, the dataset funding was awarded from NASA headquarters, therefore such a dataset does not go through the usual acquisition process.

A suggested way to circumvent such occurrences is to make the relevance information of which dataset is better than the other as visible as possible on the catalog pages of the NSIDC website. This could also be achieved through documentation and the “related datasets” list. The UWG considers such resources as incredibly important to new and current users. In the new search tool (demonstrated during this face-to-face meeting), includes the ability to compare datasets, which would prove very helpful to such efforts. Other tools such as crowd sourcing provide information about data downloads etc., should be used to help the user ascertain which dataset will best fit his/her science needs the best. The scientific community should know which is the best one so let the numbers talk for themselves!

UWG Recommendation: Actively pursue download statistics and displaying such information to users. We would hope to have further updates/ideas on this issue by the next meeting. Develop “related datasets” lists and documentation to reflect the comments above. The UWG would like effort and ideas on how to explore crowd sourcing in formation on datasets. Work on documentation to make data dependencies and traceability clear. Related data needs to be very clear. This should be a high priority.

4. How would the UWG like to see metrics?

UWG: We like the top/bottom 10 display, but what has happened to data sets that have fallen off this list?

UWG Response: We still like the top/bottom ranked datasets approach, but would like to understand what happened to datasets that once featured on these lists and then disappeared? Download statistics are not necessarily the best metric to use for dataset popularity, whereas we feel citations are a particularly good metric to use in lieu of this. We hope that tracking dataset citations will get easier with the implementation of DOI's. Is this an accurate assumption?

Metrics the UWG would like to see:

- How many times was the data cited?
- How many times was a seminal paper that featured such a dataset cited?
- Is there a dataset that was really popular and then decreased abruptly?
- What datasets are rising and falling?
- # of service calls on a dataset.
- Most recent citation of the dataset.

UWG general metrics comment:

- Some FTP downloads look a little suspicious that appeared in the product reviews.*
- With regards to User support, tracking # of complaints of a particular dataset is not necessarily a good metric for data popularity. This may just be more citizen scientists.*

5. What could NSIDC do to improve upon interactive interfaces, theme highlighted in the “bring value to NSIDC data” session?

UWG: Ideas for either long-time users or novice users?

UWG Response: (name of UWG member that suggested tool listed where appropriate)

- Time slices/series of the sea ice extent graph. Point time series extraction.*
- Any type of ice sheet mass balance tools. (UWG member: Leigh Sterns)*
- Possibility of linking with the Northern Hemisphere snow tracker being developed by Environment Canada. (UWG member: Chris Derkson) → This raised a separate issue: How much outside/brokered data should be included in such tools?*
- Worldview was very impressive and it would be great if you could tie it with the data.*
- Graphics in general, any level of interaction is great. Recreate CharArctic with other datasets. UWG sees CharArctic as a great prototype for future tools!*

Summarized further by Donna Scott/NSIDC in meeting transcript (page 15)

6. “Search” priorities: exercise will be explained by Amanda

UWG: Vote on “Search” priorities.

Summarized by Donna Scott/NSIDC in meeting transcript (page 17)

7. What would the UWG like to see as follow up to the product review/actions taken for certain data sets?

UWG Response: Overall, the UWG appreciated all the time and efforts taken by NSIDC in creating a highly efficient method for product review. The data collected, summarized and provided to UWG members ahead of time meant that the process was painless and the UWG members commented that they would be agreeable to review more datasets in one setting if necessary. This is particularly true if datasets were categorized in terms of ones that would be quick, and which ones they require more discussion. Regarding FTP statistics see notes from wrap up of the product review (page 20).

8. How did UWG members find the format of this face-to-face meeting in comparison to others?

UWG Response:

- The meeting was more focused.*

- A suggestion for future meetings to designate timeslots for NASA specific issues, as in the past, such issues tended to pop into multiple sessions resulting in tangential discussions.
- With Donna Scott running the meeting, Ron Weaver was free to wear his NSIDC "DAAC Manager hat", and contribute freely in this regard. The UWG liked this format.
- Tasks were well received. Perhaps more time scheduled for the search activity.
- Good to have the meeting in Boulder as it allows for DAAC member participation, which is very welcome!
- DAAC scientists should attend the meeting. See comment in AI #1 on UWG having a list of NSIDC scientists and how much/months per year they are supported by the DAAC.

9. New membership? UWG: Call for suggestions

UWG Response: Soil moisture issue and SMAP are under represented. From the list of early adopter for SMAP, can we identify potential UWG members? We also need a new Mountain snow person to replace Noah.

Executive Session was then open up for general discussion/commends. Two recommendations/comments were recorded:

1. UWG recommends going through the NSIDC website and searching for broken links.
2. A general way to look forward to the future is to [consider] data processing done on the public archive live, rather than only offering the processed data on the archive.

DAAC Actions and Deadlines

Action Title/Number	Action Description	Deadline
DAAC Science Support UWG31-1-1 (UWG mtg # - action # - exec summary ref #)	Provide a list of NSIDC scientists and how many months per year they are supported by the DAAC. It would be useful to understand which NSIDC scientists are primarily DAAC funded versus outside funds.	12/31/2013
DAAC Contract Support UWG31-2-2	UWG concerned with amount of admin time needed to support the new contract approach (five 1-year budget cycles). NSIDC will report admin costs to UWG after completion of 1 st year contract transition (5/31/2014).	8/31/2014
DAAC Data Sets UWG31-3-3	Provide "related data set" lists in user guides doc, so	Fiscal Year 2015** Semantic-enabled related

	users have access and information to similar data sets.	data set lists is an effort NSIDC DAAC does have planned for FY15 . The project schedule is based on its logical implementation after an effort to dynamically generate components of the user guides.
DAAC Data Sets UWG31-4-4	Provide data use metrics in user guides, so users have more information about the use and citing of the data.	9/30/2014** NSIDC DAAC has a targeted effort in FY14 to integrate data distribution metrics into a single application for improved analysis, display, and validation.
DAAC Data Set Metrics UWG31-5-4	Along with showing the top 10/bottom 10 data set usage, provide some information on the data sets that have migrated off these lists for the next UWG presentation.	No later than next UWG face-to-face meeting
DAAC Data Set Metrics UWG31-6-4	The UWG would like to highlight recent citation metrics on the catalog page of a data set	9/30/2014** NSIDC DAAC will use a tiered approach in implementing published research citations at catalog level.
DAAC Data Set Metrics UWG31-7-4	Assess metrics from product review that look suspicious and report back to UWG.	3/31/2014
UWG Membership UWG31-8-9	The UWG needs a mountain snow representative to replace Noah. Consider a SMAP early adopter for soil moisture representation. NSIDC and UWG to nominate new members.	3/31/2014

** See UWG action item page for further details on action and deadline
<http://nsidc.org/nasa-daac-uwg/category/current-action-items/>

Meeting Transcript

The following notes were recorded throughout the meeting.

Welcome – Donna Scott

Reviewed the meeting goals and agenda

<http://nsidc.org/nasa-daac-uwg/2013/04/agenda-uwg-meeting-31>

NSIDC will ask NASA ESDIS and HQ staff to address the UWG membership at a future telecom since they were not able to attend this meeting. The UWG is in support of this invitation.

NSIDC Welcome – Mark Serreze

Discussed data management being the biggest portion of NSIDC. Informatics research is up and coming. Strength is in synergy between data management and scientists doing research at NSIDC. UWG provides necessary external view to help us make sure we are moving in the right direction.

CIRES Welcome - Waleed Abdalati

NSIDC is the largest group in CIRES. CIRES is largest institute at CU in number of researchers and students, and tied with LASP in terms of dollars. Cryosphere has been a focus and strength at the university and CIRES.

Cryosphere is very visible at CU. Jennifer Kay is recent hire from NCAR. She will be a part of Atmospheric Dept., but we are looking for an affiliation with NSIDC. She is involved in large-scale Arctic Atmospheric research. There is an effort by the university to strengthen its Aerospace efforts; CU is calling new area Aerospace Ventures. There will be a new faculty line which is loosely defined. CIRES is working on search committee, trying to put energy and resources into a hire with an Arctic focus.

Cryosphere is mainstay at CU and CIRES. CIRES invested in making sure NSIDC is successful and able to serve community. The DAAC is the bread and butter of NSIDC. We want the integrity to be maintained and robust.

Wearing NASA Chief Scientist hat – Waleed Abdalati

Trajectory in the past of putting NASA science on path toward faster and cheaper (not necessarily better) did not fully succeed. Now more agile. For example, Earth Venture attempts to get more agile and get out of the “EOS Mode” of doing things. What this means for data practices and needs to support NASA in the future is making usable data sets out of things that are cumbersome and complicated. There will be more PI ownership for turning level-3 products into something useful. It still

requires oversight, thoughtful data management, presenting the data set, etc. Believes there will be a shift in emphasis from the planetary missions to discovery missions, where PI creates and analyzes the data. Volume of data isn't changing that much, but our ability to manage it has changed. This is where NSIDC can help, so we need to position ourselves to work well under new paradigm.

Welcome General Discussion

UWG (to NASA-hat Waleed): Data management is being discussed earlier in mission planning, so that should make it easier for the PIs?

NASA (NASA-hat Waleed): Definitely. But we still need advice. A PI who is smart, capable, savvy is still not fully equipped to make decisions for the equipment.

UWG: Is that not making it back to the projects?

NASA: It is, but they still need community guidance. Maybe town halls to review what the PIs are doing. The science team will likely have to be reviewed by members of the community. I think there will always be that dialogue, but the format it takes remains to be seen. There is a shift of building data management into the missions up front. Ultimately it's about serving the community. This is becoming increasingly more important as missions become fewer. It's hard to think that the data we are working on now is the data mining of the future, so we need to make it usable.

UWG: Was the current DAAC contract a competitive award? Are there things you feel that NSIDC has to work on? Do you feel that the contract is set?

NSIDC: It is a competed contract that is renewable. The rest of NSIDC are grants. Lots of grants that involve data management. NSF, NASA, NOAA. The DAAC is 50-55% now. We are being squeezed; need to do more with a less. Science support under the DAAC has slowly gone away. We proposed to augment our post-doc. We intend to push ESDIS to try and reinstate some of the funding for post-doc. NSIDC losing science edge is concerning. We do not want to become the Wal-Mart of data management.

UWG: Shouldn't science be picked up by CIRES?

CIRES: That has been discussed. That function and capability serves the DAAC and NASA and was worth the modest investment. It's one thing for us to say it, but another to implement.

UWG: You still have support for the DAAC scientists?

NSIDC: Yes, it has continued to shrink through the DAAC work priorities. We try to make it up in other ways. It is more an issue of tighter funding environments. Give us some recommendations.

UWG: You were proposing to do data work through NSF (referring to suggesting of collaborating and sharing resources)

NSIDC: We were funded for ACADIS collaborative project. Collaboration is challenging in data management. We were able to develop Arctic Data Explorer and leverage that for NSIDC Search. The NSF funding was able to benefit both products. Doing more with less by leveraging resources with common infrastructure.

UWG: You have an [ACADIS] advisory panel? Are there things that come from that meeting that would benefit here?

NSIDC/CIRES: Yes, though there's not much that would be interesting here. Have to be careful of the mixing projects. We are starting to see the fences come down, but disturbingly slow. The user does not care if it [data] comes through NASA, NSF, NOAA etc., so the fences could hinder science. Kelly Faulkner (NSF-OPP Deputy Director) is more engaged in conversations "across the aisle"

DAAC Highlights - Ron Weaver

[Presentation link, pre-meeting materials link]

Contract

New contract period is Jun 1, 2013 – May 31, 2018. \$6-7 million/year, where we've been running for last several years. \$42 million is the ceiling, we do not expect to get all that. We anticipate more negotiation and oversight in this new contract. We'll get a zero-sum budget. We will negotiate actual budget and what we actually get yearly.

Contract General Discussion

UWG: Did you take an overall hit on the DAAC budget?

NSIDC/CIRES: We got a sequestration hit, and its slimming down. Remaining flat. We received over guides for supplemental funding for a few projects (IceBridge, Change Maps, Aquarius). The reward is not losing money.

UWG: So IceBridge is funded outside of the core DAAC?

NSIDC: Originally, yes, but then got rolled into the core contract. Then we received FY13/14 additional funding for IB data management to augment data access tools and services.

UWG: Would be nice to get an overview of the DAAC now and then and where the funding comes from.

UWG: How much time does [new contract administration] take? More costly in overhead for negotiate? Is that how all the DAACs are now?

NSIDC: We don't know yet [administration]. In the past workplan prep etc. was 2 months of devoted work. Historically with a 5-year contract we could roll some money over from year to year, but think we can't now. ASF has a different contracting vehicle but Ron believes that CIESIN has the same contract type as NSIDC.

CIRES: Presumably the burden won't be as high for a one year? What is the basis of the change? Did they give you an explanation? You ought to ask why. Should ask until you get an answer that satisfies.

NSIDC: NASA contracting office made the determination of type of contract and they didn't share their justification. Point taken.

Flood Briefing

UWG: Most of your data is stored offsite?

NSIDC: NASA EOS data is stored offsite because it's produced offsite. It would be difficult to get it back, but we can. Unique data sets are stored at e-fort in Denver. There are a few exceptions that we are working on.

Project's and Product Team's Highlights

Main highlights are available in the presentation. Additional notes regarding the project/product teams follows:

EDB - Not actively being developed. We reorganized metadata into a modern database system. This allows us to now consider and implement more data services, like Search.

UWG: How is EDB different than ECHO? Is it separate or the same?

NSIDC: They are interconnected. EDB enables a lot of capabilities across our site. EDB is the authoritative metadata representation for NSIDC, and ECHO is for EOS mission data.

Data management wasn't implemented early in OIB, so a lot of work to create infrastructure to get this into the more robust ECHO.

PM - With the government shutdown, our input data stream [SSMIS from CLASS] is turned off, so we are not producing near-real-time data.

AMSR-E - Calibration data now being collected. That data will be made available to science community to calibrate AMSR-2. When satellite missions end, data are still available and user support continues. We are educating NASA that funding is still needed to support dead missions.

ICESat/GLAS - LTA will be complete in 2013. We think that the recent spikes in usage are related to CryoSat.

SMAP- The science team is very in tune to data management issues.

ICESat2 - Data management issues with format, volume, and how the data fits into current data models. Going to produce 1 TB / day. Launch has slipped to 2017.

Aquarius - Mission already flying. PO.DAAC is the main archive for sea surface salinity. Research data sets on soil moisture will come to NSIDC

AMSR-2 - AMSR-E science team will produce the higher level geophysical products with their algorithms. The science team will do inter-calibration. We'll work to make sure the two time series are interoperable. There will be two separate data sets.

UWG advising the need to make it easy for users to make the connection and minimize the confusion.

MEaSURES - Mary Jo is PI on enhanced PM TB product for MEaSURES 2012.

They will review which version of input data to use (RSS v7, CSU, etc.).

General consensus from UWG that we need to do a better job of assessing similar data sets at NSIDC, so not to duplicate data set creation and cause more confusion to the users.

Metrics - UWG consensus that NSIDC should be providing more information on the data sets that fall off of the top 10/bottom 10 lists.

Data Accession - Donna Scott

The UWG reviewed three possible data sets for data accession.

1. First is GlobSnow - request to broker (D. Scott, NSIDC)
2. Aquarius TB (L. Bruckner, GSFC)

3. AVHRR Polar Pathfinder Twice-Daily 5km EASE-Grid Composites –More of a question of whether the DAAC should process this data in the future (D. Gallaher, NSIDC)

Specific questions, answers and next steps captured in data accession packet. A summary is provided below.

1.) GlobSnow

From UWG comments in the product review process, it was recommended that the DAAC not put resources into the update/processing of the Global Monthly EASE-Grid Snow Water Equivalent Climatology (nsidc-0271), instead point users to the GlobSnow product. It is an updated, well-validated and well-documented data set. Donna has had email contact with this group, learning that the data will be updated, comes in multiple formats, has a near-real-time version, and will soon have mountain SWE (caveated).

UWG recommended moving forward with brokering this data set with the understanding that NSIDC become more proactive in ensuring that links for brokered data sets are maintained and functional.

2) Aquarius TBs, Normalized Radar Cross Section, Sea Surface Salinity

This data set is created by Ludovic Bruckner from GSFC. PO.DAAC is a primary Aquarius data center, with NSIDC added to provide support to soil moisture products.

The UWG had many questions about the content of the data and if possible duplication with other Aquarius products exists. The UWG would also like to see a published paper better describing this data.

3) AVHRR Polar Pathfinder Twice-Daily 5km EASE-Grid Composites

AVHRR 5km data has been pulled from NSIDC for X years due to severe geolocation problems found in the data set. NSIDC has been working with Jeff Key to get his 5km APP-X update. This is expected very soon. This data accession request is to take over the 5km AVHRR processing for J. Key, as he does not have funding in the future to do this. This will not be an insignificant undertaking as the code will have to be worked into our production system.

The UWG has questions for J. Key about the differences between NSIDC's 5km AVHRR and the APP-X. The UWG would also be interested in an estimate cost of converting J. Key's code to NSIDC production system.

Value to NSIDC DAAC Data - Amanda Leon

Showing ways we've tried to bring additional value to the data DAAC holds. Providing data services is becoming increasingly important, as we see a broader

user base with less Cryosphere background. Data volumes are growing, even as missions are reducing support. More efficient data selection and analysis is needed. The DAAC has over 300 data sets, so we will have to prioritize which data gets services.

Why now? Our infrastructure has improved, allowing us to move forward with technology and bringing more value to showcasing our data sets. We have a larger development group, with different NSIDC programs bringing valuable resources for collaboration within the center.

Demonstrated Data Services

Operation IceBridge Portal - <http://nsidc.org/icebridge/portal/>

A map based visual-based tool. It is now going through a redesign to improve underlying infrastructure.

NSIDC: Relative to having science users not familiar with OIB we are swapping to make it product and instrument specific rather than flight based. Data providers are willing to generate more metadata in order to support better capabilities.

UWG: Great to be product/instrument based. From OIB science team perspective, the tool has come a long way and people are happy with it.

Charctic - <http://nsidc.org/arcticseaicenews/charctic-interactive-sea-ice-graph/>

This was a development idea, realized in the newly instituted Hack Week, giving developer's time to explore and develop technologies. Charctic was developed to present interactive view of sea ice extent. We used off-the-shelf tools for web development, with very little code behind it. Walt Meier picked up funding through the NASA funded "Sea Ice News & Analysis" site.

UWG: Very positive feedback on this interactive tool. Some members are using this tool in classroom settings. Would like to get cross sections of data, showing particular values over the same time period of each of the 30 years. Would like access to the underlying data.

Greenland Today - <http://nsidc.org/greenland-today/>

Similar to the popular Arctic Sea Ice News & Analysis, it was developed in response to Tom Wagner. It launched Jan 1, 2013. It is currently showing Greenland data from Tom Mote. This data is essentially a near-real-time version of the MEaSURES data set he is producing.

UWG: Consider branding this better, making it hard for users to strip out NSIDC from the images.

NSIDC: Users still cut off the branding details unfortunately. There are no interactive features to this yet like ASINA.

UWG: Who is running ASINA?

NSIDC: Julianne is primary, but many science staff responsible, including Walt from GSFC now.

Global Imagery Browse Services (GIBS)/Worldview -

<https://earthdata.nasa.gov/labs/worldview/>

Taking advantage of ESDIS and ECHO services more often, we are working with GIBS to get a few collections of NSIDC data into GIBS: AMSR-E, MODIS, and HQ requested John Kimball's Measures Freeze/Thaw. GIBS started as near-real-time, since Earth data was declared operationally essential due to near-real-time availability. NASA is now trying to broaden the audience. NSIDC still considering the use cases. Much of NSIDC data will require resampling to fit in the resolution requirements, with a minimum resolution requirement of 8km.

UWG: Examples of data that should go in GIBS include GLIMS and sea ice data. Surface topography and bed maps would be useful here.

NSIDC: Been talking to SMAP about use cases for high resolution browse for GIBS. There is also some thought about putting our base layers into GIBS, and then pulling them back out for our interfaces rather than through our own mapserver.

NSIDC: NASA focused mostly on EOS and MEaSURES, but looking at DCs to provide use cases and data, like v0 data sets. GIBS working with MODIS and AMSR-E producers to get these browse images into the system. NSIDC does not have the near-real-time versions of these data sets.

UWG: This is good for browsing, but how do you get to the data and information about the data behind the browse? Can you subset the images?

NSIDC: Downloading data capability not part of this version, but it is in the works for the future. You can get a GeoTIFF of the browse area you select. Future releases also include a plan to represent metadata and give users more information.

NSIDC: GIBS will load in a bunch of layers into their service. Might become overwhelming, so specialized UIs might be needed. Worldview is NASA's chosen demonstration portal.

UWG: Who is responsible for funding this work if this is an ESDIS mandate?

NSIDC: There is a spectrum. Ideal for GIBS is we do the work to create the imagery that meets their specifications. They have capability, but are trying to put more of the work on the data centers and providers due to resources.

UWG: how do you link between your data and the system?

NSIDC: We have some ways to imbed in site so that users can find it. In the case of AMSR-E and MODIS, GIBS is working directly with the SIPS. For EOS missions, it removes the burden from data centers. For MEaSURES and v0, we will have to do the work.

DAAC Data Services Focus

The DAAC has ideas for what data services we should focus on. What does the UWG think is valuable for the DAAC to consider in the near term?

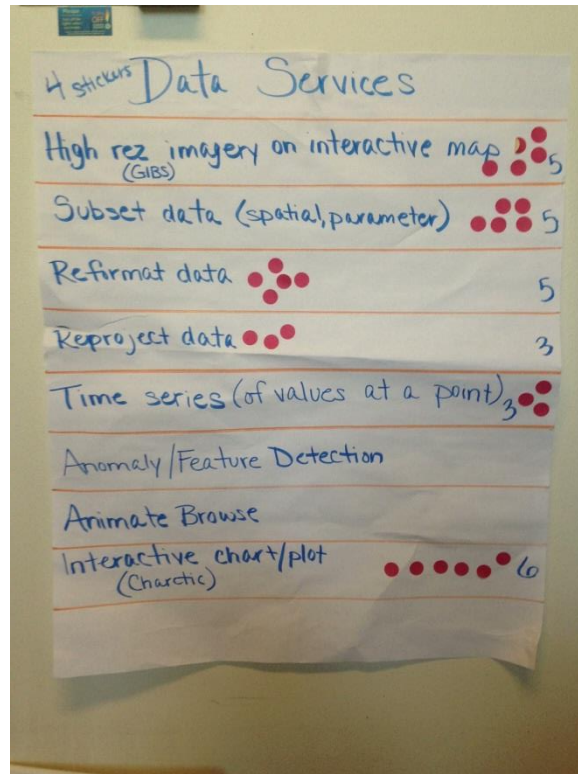


Figure 1 - Dot voting exercise for quickly determine what is important for data services

Data Services General Discussion

UWG: A lot of these tools, especially mapping, good for new users. Don't lose sight of the users who just want to FTP certain data sets as they exist. It's the easiest way due to firewalls. Still pushing the need for generic FTP instructions on the site. I use FTP at most DAACs. Found HTTP requests, restful access is easier to implement trying to get something close to operational.

NSIDC: Our FTP area isn't set up for users to browse, so having general instructions will be difficult. We would like to head into the HTTP direction, and looking at various options. How do users learn about these APIs?

UWG: The NCDC has an API for their WMO and I have had success in using that. I haven't found many that are implementing. When updating data continually, these services are useful rather than FTP requests. FTP tends to be fast, which is why people still like it.

UWG: Having a script to do downloads makes it easy on user. Why not provide snippet of sample code for automatic download. This could include code that knows how to subset and reprojection. And provide example code that users can utilize in their own code?

NSIDC: Does anyone have some similar mapping tools that they use? Google doesn't have any interest in a polar projection.

UWG: getting polar projected in Google Earth is challenging.

UWG: Look at what ORNL does with Google stock market tool. Contact Bob Cook (Oak Ridge)

UWG: its important things don't move around. Recursively grabbing is important. Discussion drifted off of the new tools. Feels that the tools make it easier to find and get data. Love the interactive sea ice graph and is a great way for NSIDC to move. Underlying data should be made available. In developing these services need to consider how you keep track of where the data are archived, version changes, issues with the data. Right now, no provenance. Imagery doesn't give you that. In the best case, make it simple to talk to whoever is processing the data.

UWG: Consider the user types. Novice users may want CSV and ASCII, where more experienced users can handle HDF and NetCDF. Ultimately it's incumbent on the user to determine the region of interest and the data they want. Then it's determining time period and getting the data. Scientist probably require an ability to define a temporal range and then get the data. For worldview: it seems that all is left is to select a temporal range, then the camera can give you the GeoTIFF.

Search Usability Testing - Amanda Leon/Sarah Tressel

NSIDC has received feedback that we are not doing an adequate job with data search and discovery. For this effort we leveraged work from ACADIS, and used the ACADIS project lead to help share the work. We have done some in house usability testing, so have a sense of areas we need to tweak already. We just want to make sure that what we have implemented so far is a decent experience and functions appropriately.

UWG members worked individually with two NSIDC representatives in usability testing.

NSIDC will release the new Search as soon as possible. Upon adjusting a few items based on UWG feedback, the UWG does support releasing the new Search as soon as possible. It is a much better interface than what NSIDC currently has. They do not think new functionality is needed before the initial release.

Based on the usability testing, what future enhancements should NSIDC focus on in the near term (not initial release)?

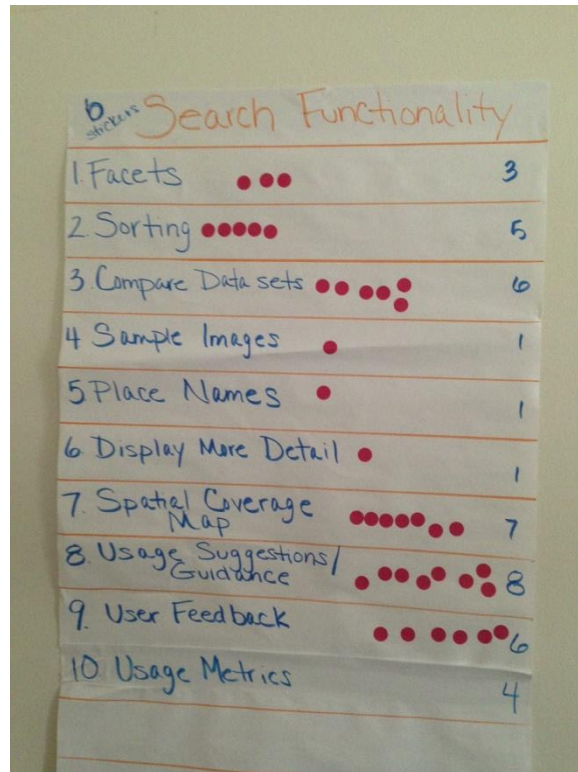


Figure 2 - Dot voting exercise to quickly determine important Search functionality

Note: Since facets are currently being developed, the UWG put focus on other functionality options.

Search General Discussion

Relevance ranking:

UWG: Who decided on relevance? It seems like the first one that comes up is the one you would expect to come up at the top. In some ways, the UWG could be a reference as to which comes up first. Which is the one that is most important? You are directing people to the data set that you think they should want, which is important.

NSIDC: Currently based on popularity. This is something that will always change. Relevance is a moving target. The algorithm to do relevance combo how relevant the result is to term frequency (standard way of doing it), and weighted from a score by use.

UWG: Make relevance transparent. Why are the data showing up in this order? Maybe have a button “most relevant” or a “most recent” (temporal coverage). Adding number of citations into list of relevance would be helpful.

NSIDC: Are we giving preference to larger temporal or spatial coverage? No. Would it be helpful to put some kind of score on results?

UWG: I already have 24 choices, and then I have a choice of how to rank them? I want a logo or symbol that says “start here” so I know where to begin.

UWG: user stack overflow – can bump up or demote data. There is a lot of inherent knowledge in the community about what is good and what is not.

NSIDC: is that something you would know when you were on the site, or would you have to come back to give your vote. How would you know what you didn't like?

Data Quality and comparison:

UWG: Would love something that will guide through multiple options. Found the options intimidating. When looking at stuff I don't know, I want to know how many people looked at the page/data. Add number of citations in the results.

NSIDC: We could have a quality discussion on the data. Here's what the data are best at, and here is what they are not good at?

USO: Felt overwhelmed looking at all the options. Would not even think to call USO to help with data selection.

NSIDC: that's good to know as we now know that there is likely a portion of users not contacting. USO note might be needed in the "more detail"

NSIDC: Showed mock up of the comparison feature

UWG: "It's great". Noted that mockups lost the project icons. Some found it very distracting to have the project icons next to the get data. Some liked it, as certain projects make it clear what type of data you may get, and the quality you may expect.

Searching behavior:

UWG members work very differently, so where some had concerns with specific features; others were fine with those features.

UWG comments include:

- I search on parameter, not by a date alone. Once I get results, I then look at temporal coverage. For geophysical data, you are often more approximate on data selection. Maybe a temporal bar for selecting.
- If you just put in a year, will it default to the first of the year? NSIDC: Yes
- When I think about what I want, most searches are conducted on a textual basis. But when I think about data, I'm thinking about a spot on the earth. Makes textual search difficult to get right. Maybe most of the difficulty arises in being stuck in the wrong paradigm. Useful to consider a drop-down list of place names.
- Had a hard time reading the spatial coverage as text. Image would be better. NSIDC responded that testing showed members tripped up on the number of coordinates in some of the IB data sets.
- In the spatial map, better to say "hemispheric, north pole, south pole, or regional"
- There was thought that a lot of the buttons there were worthless.
- Some didn't feel that the globe button was intuitive to know it would bring up the map. Others though map was intuitive.
- Reset button hard to find, it was unclear if we'd lose our entire search so far, or just in the window with the reset button.

- Might want to mark the data sets that are easiest to use in a prominent way. Even a savvy user of complicated binary wants a picture. NSIDC: What is considered “easy-to-use”? We have had this in the past, but nixed for terminology and how to properly define “easy-to-use”.
- Not sure he was satisfied with where he got with his scenario. Would like to have seen what Google gave me. NSIDC: This search is more oriented toward the case where you don’t quite know what you are looking for
- All commented that they missed the help arrow. NSIDC: If that was an “I” would that tell you more? Yes

General usability:

UWG: What happened to the PO DAAC model? Filters would have helped dramatically. Formats, grid types, etc.

NSIDC: PO DAAC did not put temporal searching. No temporal filtering. Didn’t feel that their user community felt it was a priority. PO DAAC just did text search and straight to filtering. We have the technology stack to support faceting; it just hasn’t been implemented yet.

UWG: Some felt that the main search entry page is too distracting. Others thought it was engaging and would attract larger group of users.

NSIDC: This is an interim design, and is good feedback because it justifies the work we’ve done already for the landing page. Brought up the mock up for the group.

UWG: Unanimous that mock up for live site with plain text is a better version.

NSIDC: If you fill out a profile one time and then things were filtered more on you, would you do it?

UWG: Possibly, but I’m often a different type of researcher based on the situation. You’re not going to drill down far, especially if you are just looking at something for a class. If you had user data, you could make more informed decisions about how to design. Entice users by offering them updates on the data sets they prefer, then I’m getting something.

NSIDC: We do have contact forms that users can fill out for data update information.

UWG: explore technology of logging in Google, Facebook accounts. We could learn about the user, and send info on data updates, other data sets that may be useful, etc... We need to make it easier to get updates on data, rather than filling out a big long form.

UWG: Doesn’t NASA have a global registration now?

NSIDC: Yes, NASA wants to put a log in in front of anonymous FTP. NSIDC has not implemented yet, as it gets into challenges across programs.

Releasing New Search:

NSIDC: Iteratively release vs. fewer, bigger releases

UWG: Don’t do what Reverb did. It was bad. You don’t want to embarrass yourself. It may depend on level of comfort; will the release serve the users? There are tweaks that need to be made still, but don’t hold up the release for all the new features we

have discussed. Release it and let the users find it. It is better than the current search.

Reverb – Amanda Leon

NSIDC has been working w/ ESDIS to further develop Reverb. It is design by committee, without a real web designer. LP UWG wrote a letter that they are unsatisfied. The blink study commented, and nothing changed. There use to be another interface for data pool drill down, but that is now gone. We have concerns about the design and hardship for our users. It has never been stated that we are required to use it. We are trying to figure out if we need our own portal, or we need to push harder for Reverb changes. With our own search, we may need to have it interact directly with ECHO. The differences between NSIDC Searchlight/Polaris and ECHO/Reverb was explained.

UWG: Laptop screen has some issues as the screen was too small to see all of Reverb interface. Used the science keywords window. Felt he was going to undo everything by clicking on the “x”. Wasn’t comfortable that the selection was actually being made. Search on “clouds” for instance didn’t return anything. Couldn’t find search button. Didn’t see that things were populating automatically. You can’t change the search options easily from the results page. Did not easily see how to get the polar projection. No one understand the difference between order, download, and perform service.

Product Review - Lisa Booker

Basic review of the project, and purpose. We’ll have to do PARCA review after this meeting, sometime after Oct 25, 2013. All recommendations going back into quad chart, and will be sent back to UWG groupings for final approval. A report will be created to present the recommendations to DAAC and NASA. A report should also include what happened to data set as a consequence of our decisions and recommendations. In addition, a future plan for this process in the future, including estimated review periods.

The break out review groups looked at 20-23 data sets. There are a few lingering questions about of just a few data sets. We will still need to do the 10 PARCA data sets. There will be one final telecom for these.

Product Review Retrospective – Lisa Booker

We are looking for feedback for how we should do this process in the future.

- 1) We provided a preliminary recommendation. Was that useful or would you have preferred your own opinion first?
 - a. Prefer context from NSIDC
 - b. In cases where expertise does not exist on the UWG, finding someone outside of the UWG would be helpful. Consider a scientist at NSIDC.
- 2) For those that participated in telecon or face-to face, what is preferred?

- a. Telecons seemed okay, but having less in the telecom is preferred. It is easier to do more in a face to face. NSIDC can determine what are easy to assess, so you could do more. Grouping them into like categories would make it easier.
 - b. Scheduling was quite difficult. Having a 20min longer telecon with more review would be easier than having multiple telecons.
- 3) Has anyone participated by a product review in the past?
- a. Yes, but this one was much better. It had more information, rather hearing from PIs talk which lacked the information you needed to make a decision.
 - b. UWG doesn't have a good sense of the cost associated with supporting data sets. Making decisions is a little hard without this information. Could we get a better sense of this cost? **NSIDC:** Not easy to give more specific cost. We can get an estimate from developers on putting services onto a data set. We can group this by type of data.
- 4) How frequently should we do this?
- a. Everything should be reviewed at least once in a five-year period. We do envision doing this on a rolling basis.

Product Review General Discussion

NSIDC clarified Levels of Service. A low level of service does not imply the data are no longer discoverable. These data sets are still on our distribution site. Decommissioning a data set is not represented in our Levels of Service categories, perhaps we need to add this section. When we retire/decommission a data set, we remove it from the distribution site. The data are persevered on the archive. The catalog page remains with some information to the user about acquiring it if needed. We can't predict what science topics will be relevant in the future, so some data sets we archive may become relevant in the future.

UWG: It should be more transparent about the Levels of Service provided for a data set.

UWG: Pay attention to newly accessed and acquired data. How does that fit w/ like data that already exists? **AI for self:** part of the accession process.

NSIDC: In some cases we really do have an obligation to carry the data on. How do we determine where our obligation stops? For example, with SMEX, after a certain time frame, is it appropriate to reassess keeping it online? Keep in mind we can still maintain the obligation to preserve without it being readily available in distribution.

Review of Past Action Items – Donna Scott

A review of seven open action items from past meetings resulted in the decision to convert three actions into standard processes for how the DAAC and UWG will

interact. Three actions will be closed. The Search interface action will carry into 2014, and will be closed when the new Search is live.

2011-1 DAAC should use the expertise of the UWG membership when issues arise. To assist the DAAC personnel, the UWG membership have volunteered to help.

- Donna would like to see this become a process for how the groups interact. UWG agrees. NSIDC will determine categories and work with UWG to assign points of contact in the membership

2011-2 Webpages need to be changed and updated. UWG liked the PO.DAAC approach to their website. We would like to see changes made to the NSIDC data search pages to improve search effectiveness. NSIDC should request feedback from UWG on changes to Webpages

- With recent briefings on newly developed Search, this task is nearly complete. UWG agrees that we can close this action once the new Search goes live. Search will continue to be a work in progress

2011-3 The UWG recommends that NSIDC implement the recommendations that came out of the PM Data Workshop.

- This work has been completed, will close the action.

2010-4 The UWG recommends that NSIDC give homework problem(s) using the new release of Searchlight so that PoDAG members could try out the software and direct their comments towards these specific assigned problems

- This action is overcome by events, and will be closed. NSIDC will continue to use the UWG as usability testers in future interface development projects. Donna would like the use of UWG in this manner to become a standard process. The UWG agrees.

2010-5 there were questions raised by the PoDAG membership on why so many different GUI interfaces (i.e. Polaris, Sage, etc.) exist. Who participates in and how are decisions made to develop a new package and what data are highlighted for initial access? The UWG feels this should be a structured process and not just done on ad hoc basis as it appears now.

- NSIDC has taken action to address the use of technology within NSIDC by appointing an NSIDC systems architect to monitor and advise NSIDC and NSIDC funded projects on appropriate mechanisms for leveraging technology across the center, and limit the number of newly developed interfaces. This action can be closed.

2010-11 more members need to be added to the UWG. It was thought that this could be done via the internet and/or through a teleconference call.

- This action is complete with the addition of three new members (one ex-officio). NSIDC and UWG acknowledge that the review of potential members is ongoing as current members prepare to step down from UWG.

2010-12 NSIDC should let users know that the UWG exists and should direct users to UWG members to help make the DAAC operate smoothly. This might include an advertisement that PoDAG is meeting and solicit issues for UWG discussion.

- The UWG does not really want users contacting them directly. NSIDC should review any user feedback as a mechanism for driving meeting topics in the future. This should become a standard process. This action is closed.

Executive Session Report - Gina Henderson

See detailed UWG Observations and Recommendations under Meeting Summary

1. Value of post-doc position

Leery of having a post-doc in lieu of a junior scientist in this position. Will get more bang for your buck with a Jr. Scientist. Of the current NSIDC scientists, how many of those are primarily funded with DAAC money, and how much of their time is supported with DAAC money.

DAAC response:

Amanda: Have 1.1 FTE spread across several scientists.

2. Change of 5-yr contract logistics will mean yearly negotiation

There is concern that funding may not roll over from year to year.

DAAC response:

Ron: not confirmed that we can't roll over funds.

3. Concern over data activities that include duplicate data sets

Ex: Long/Stroeve Tb product vs. Long/Brodzik MEaSURES. This is a running theme that the UWG discusses. Can this be resolved in the data accession process?

4. Metrics; what would they like to see

Would like to continue with top/bottom 10 display. Want more information on what has happened with data sets that have fallen off these lists. Is the download metric best metric for use. Citation information on the data set would be interesting (knowing difficult to capture).

5. Data value session - Interactive interfaces

NSIDC should possibly consider more external resources to include. Charctic well received, but should be tied better to data sets. Worldview is impressive.

The overall session was a little unfocused and people found it difficult to give feedback.

DAAC Response:

What made you uncomfortable with the session? Would rather see it structured around "here are some things we are thinking about doing, what do you think about it?"

6. UWG follow up to the product review

Product review went well. See product review session above for further UWG details.

7. Format of face-to-face

Better focused. Good to have DAAC Management free for discussion. NASA objectives steer/dictate discussions previously, so consider areas with less NASA focus in future. Like less presentations, and more activities. Provide more time for usability testing. Good to have meeting in Boulder to have more DAAC participation. Would like to have more participation with DAAC scientist(s)

8. New membership

Noah stepping down after this meeting.

9. Other recommendations

Fix broken links across the NSIDC site.

Shift to the data processing being done on the archive live rather than just offering processed data.