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2012

This document contains an aggregation of qualitative data collected in DataONE surveys from 2012 through 2014.

UAWG

University of Tennessee, Knoxville

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Recommended Citation

UAWG, "This document contains an aggregation of qualitative data collected in DataONE surveys from 2012 through 2014." (2012). *DataONE Sociocultural and Usability & Assessment Working Groups*. https://trace.tennessee.edu/utk_dataone/146

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Preliminary Issues Found in ONEMercury

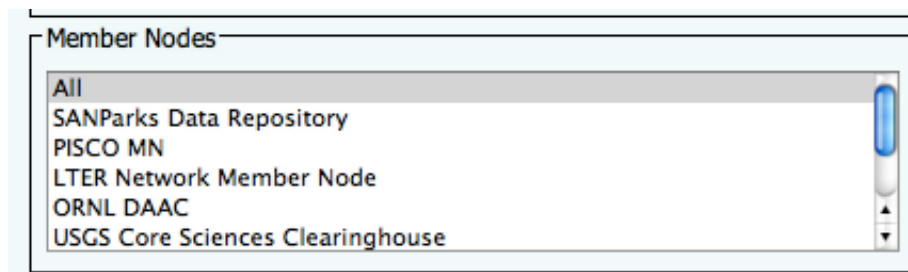
During the DataONE Users Group (DUG) meeting and the Earth Science Information Partners' Conference held in Madison, Wisconsin from July 15th – July 20th, we conducted a usability test evaluating DataONE.org and ONEMercury.

For this study, 26 participants completed a series of tasks using the DataONE.org and ONEMercury websites. The researcher continues to analyze all of the data collected and expects to have the results by the All Hands Meeting in September.

The researcher has been able to identify features that caused or could cause critical issues for user engagement with the ONEMercury site. Some of the issues have already been communicated to the Cyber Infrastructure Team (e.g., Bookmarking, Place on Map, and Originator) and have been either addressed or the features have been disabled. This initial report works to address the preliminary issues that were continually identified as problematic throughout the usability testing.

Below, you will find a presentation of screenshots and descriptions of the issues discovered.

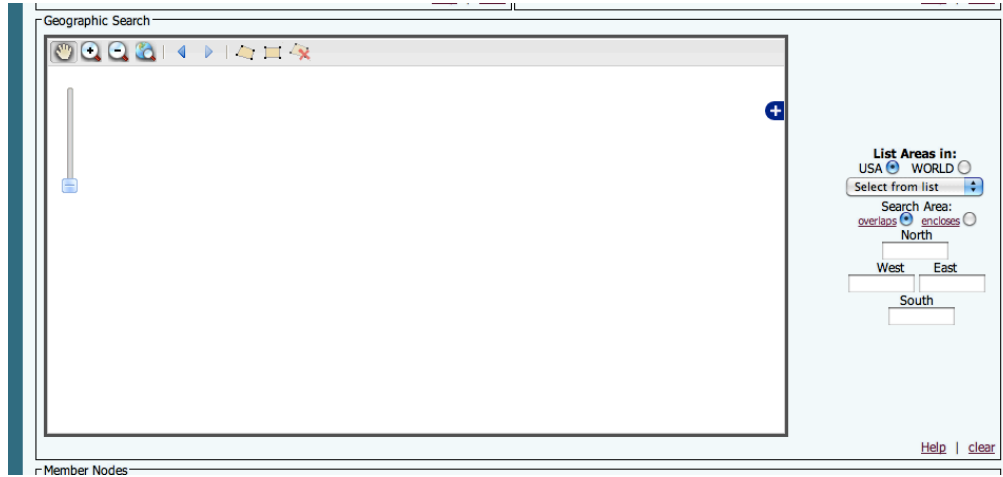
ONEMercury Interface – Member Nodes Filter



Issue: In the “Member Node” filter box there are acronyms used that may be confusing for users, specifically “MN” as Member Node is clearly spelled out for LTER, but not for PISCO. Several users questioned whether “MN” referenced Member Node or Minnesota.

Recommendation: Clearly define or write out “MN” and other potentially ambiguous acronyms (SANParks, PISCO, LTER, ORNL DAAC).

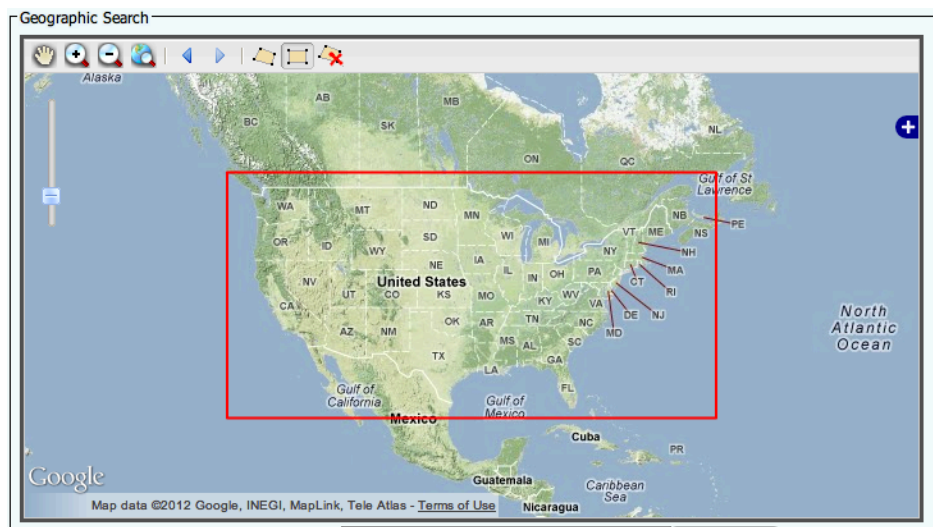
ONEMercury Interface – Map Refreshing



Issue: This screenshot was captured in Google Chrome (Mac OS), but the blank map has also been replicated in Mozilla (Mac OS and Windows OS) and Safari (Mac OS). When the user loads the ONEMercury interface (either by clicking the link from the DataONE site or by directly inputting the url), the map does not load initially and a white area is rendered. To display the map correctly (in this instance), the user would either have to refresh the page or work with the map features (e.g., zoom) to have the map render.

Recommendation: Ask if the Cyber Infrastructure team can evaluate the map feature and see if there is a technical problem causing the maps to not load consistently in all browsers.

ONEMercury Interface – Map Features



Issue: There were a few issues with the map that were repeated throughout the testing, some of these include questions related to using the bounding box and how to exit the

bounding features. There were users who thought the black parameter of the map's image was the bounding box. Similarly, there were general issues with how to use the features.

Recommendation: The help box for the mapping feature was lacking and should be more descriptive as to how to engage with its features. There could also be hover over options for each box, so that they may serve as a clue to the user.

ONEMercury Interface - Place on Map



Issue: The “Place Name” feature does not work in any browser tested (Mac/Win Firefox, Mac/Win Chrome, Safari, or IE).

Note, since the usability testing was conducted (in July) this feature has been removed from the search interface.

ONEMercury Search Results - Filter by Originator

Filter by author	Filter by project	Filter by keywords	Filter by Originator
Di Iorio Daniela (123) Hodson Robert (44) Pennings Steven (35) Bishop Thomas (31) Blanton Jackson (30) Brzezinski Mark (16) Brooks Andrew (6)	Georgia Coastal Ecosystems (271) Georgia Coastal Ecosystems (23) Santa Barbara Coastal (19) Partnership for Interdisciplinary (6)	LTER (324) GCE (294) Georgia (294) Sapelo Island (294) USA (294) water column (202) densitiv (177)	Georgia Coastal Ecosystems LTER Project (294) University of Georgia (215) University of Houston (39) Skidaway Institute of Oceanography (30) SRCI LTER (19)

Issue: Several users commented on the ambiguity of the term “Originator” in relation to “Author” and “Member Node.” They had to spend time to determine when and how to use Originator filters and how they varied or should be used within the system. A help menu with explanation of each filter and how to use the filters may have been helpful in this case.

Note, the “Filter by Originator” filter has been removed and the “Filter by Member Node” has been moved up to this section.

ONEMercury Search Results – Filter by Project

Filter by author	Filter by project	Filter by keywords	Filter by Originator
Di Iorio Daniela (123)	Georgia Coastal Ecosystems (271)	LTER (324)	Georgia Coastal Ecosystems
Hodson Robert (44)	(271)	GCE (294)	LTER Project (294)
Pennings Steven (35)	Georgia Coastal Ecosystems (23)	Georgia (294)	University of Georgia (215)
Bishop Thomas (31)	Santa Barbara Coastal (19)	Sapelo Island (294)	University of Houston (39)
Blanton Jackson (30)	Partnership for Interdisciplinary (6)	USA (294)	Skidaway Institute of
Brzezinski Mark (16)		water column (202)	Oceanography (30)
Brooks Andrew (6)		densitiv (177)	SACL TER (19)

Issue: Some of the metadata standards may not have a “Project” field (e.g., FGDC), this may be problematic for users filtering by project who do not understand metadata standards and which clearing houses are using which metadata standards. In essence, if they “Filter by project” from the start, they may not realize that they are excluding data sets that could relate to their query, but are unavailable due to a lack of “Project” field.

Recommendation: This issue is a bit more difficult to resolve, perhaps an explanation in a help menu or help window could prove beneficial, but the researcher believes this should be a point that is discussed by the Usability Assessment group.

ONEMercury Search Results – Relevance Stars

HEM AND LPH TOWERS - LEAF LITTER MOISTURE CONTENT 05/01/2006 - 08/31/2006

Datasource: LTER NETWORK MEMBER NODE

Leaf litter was collected at the time of soil respiration measurements and its moisture content was measured in order to determine the contribution of leaf litter decomposition to measurements of total soil respiration including the litter layer. Leaf litter moisture has been shown to strongly affect CO2 release from organic soil layers (Borken et al. 2003)...

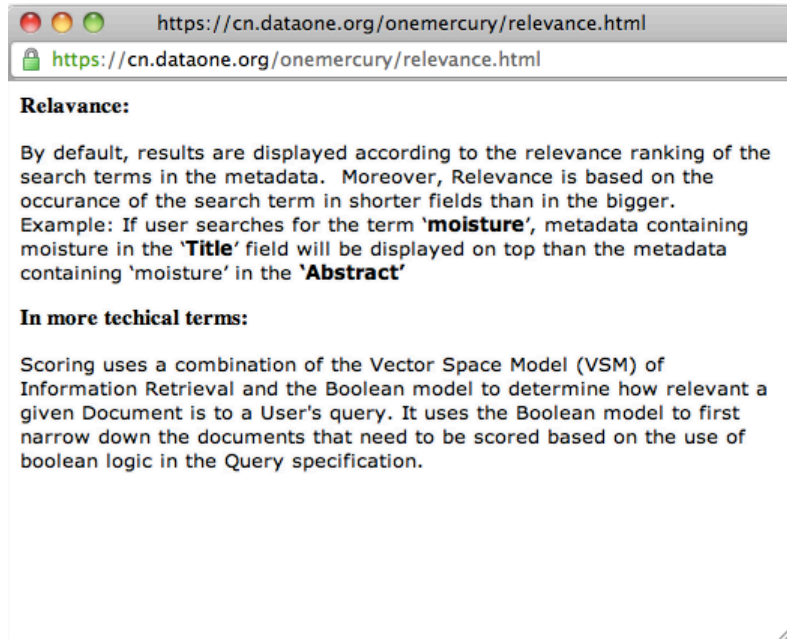
★★★★★★★★

[View full metadata](#) [Data Files \(0\)](#)

Issue: Many users (exact number still being determined, but was reiterated several times) expressed confusion over the use of stars. When you hover over the stars, a “hand” cursor appears that seems to suggest that the stars were “user generated” like other frequently used systems (e.g., Amazon products or Netflix user ratings about the quality of a product).

Recommendation: Evaluate the utility of the relevance feature, especially related to what feature is used to convey relevance. The Usability Assessment team should discuss if there is a better way to convey relevance or if this is a feature that could be disabled.

ONEMercury Help – Relevance



Issue: “Relavance” is misspelled; it should be “Relevance.”

Recommendation: Correct misspelling and then consider better explanation of the Relevance feature and its utility within this site.

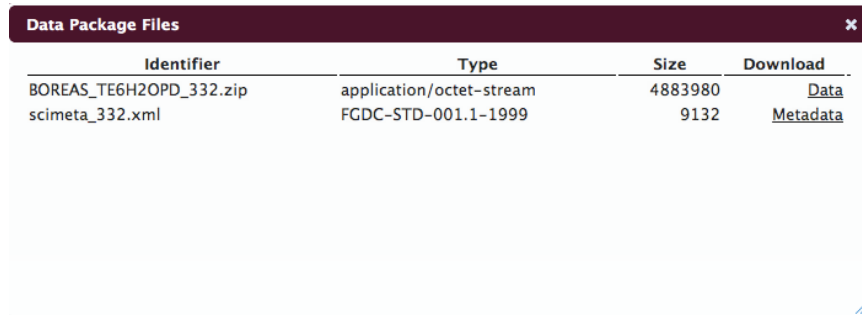
ONEMercury Interface – Data Set (0)



Issue: Seeing “Data Files (0)” confused several users. They assumed that upon seeing “Data Files (0)” the zero indicated that there was no data set available for this record and several indicated that they would skip over this record and proceed to finding one that had a data set available. Also, several asked for a way to filter by those Data Sets that were available.

Recommendation: This issue has more of a technical issue regarding the systems capability with display the available data sets, because of where they are house or stored. This should be an issue that is further discussed with the Cyber Infrastructure Team to see if a solution can be found.

ONEMercury Interface – Data Package Files Download Popup

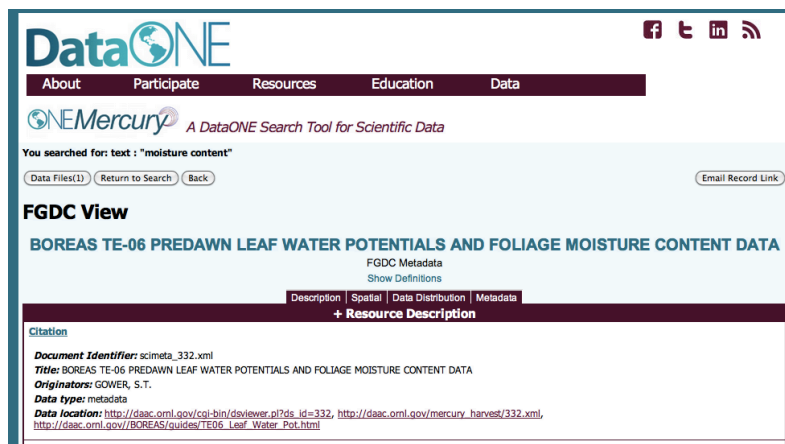


Identifier	Type	Size	Download
BOREAS_TE6H2OPD_332.zip	application/octet-stream	4883980	Data
scimeta_332.xml	FGDC-STD-001.1-1999	9132	Metadata

Issue: Users do not have the option to download the Data Set(s) and Metadata files as a complete “package”. The user is expected to download the Data Set and then return for the metadata. Not having the option to download all of the files related to a data set may be problematic for users, especially if they download multiple unrelated data sets and later try to match the data sets with the appropriate metadata record, but are unable to do so because the Identifiers (file names) vary greatly.

Recommendation: Having the option to zip the files together as a “package” would be beneficial for this system’s users. This functionality will be especially important if there are multiple data sets available for the user to download (e.g., Data Set (2) or Data Set (3)).

ONEMercury Interface – “Return to Search” versus “Back”



DataONE | About | Participate | Resources | Education | Data

ONEMercury A DataONE Search Tool for Scientific Data

You searched for: text : "moisture content"

Data Files(1) | Return to Search | Back | Email Record Link

FGDC View

BOREAS TE-06 PREDAWN LEAF WATER POTENTIALS AND FOLIAGE MOISTURE CONTENT DATA

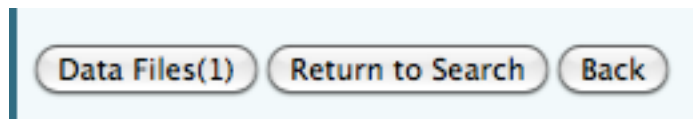
FGDC Metadata
Show Definitions

Description | Spatial | Data Distribution | Metadata

+ Resource Description

Citation

Document Identifier: scimeta_332.xml
Title: BOREAS TE-06 PREDAWN LEAF WATER POTENTIALS AND FOLIAGE MOISTURE CONTENT DATA
Originators: GOWER, S.T.
Data type: metadata
Data location: http://daac.ornl.gov/cgi-bin/dsviewer.pl?ds_id=332, http://daac.ornl.gov/mercury_harvest/332.xml, http://daac.ornl.gov/BOREAS/quickdes/TE06_Leaf_Water_Pot.html



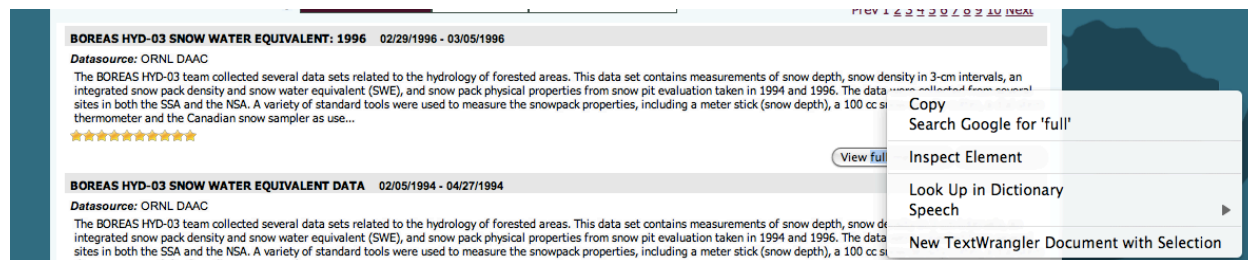
(Close up)

Issue: The arrangement of the buttons was problematic for several users. Participants mentioned that they expected “Return to Search,” to return to the “Search Results.” When they returned to re-evaluate the metadata record and its Return navigation buttons, they

were able to discern that “Back” would take them to the “Search Results,” but it was not always their initial or first response or path chosen.

Recommendation: Rephrasing the buttons (e.g., having “Back” read “Return to Search Results” and “Return to Search” read “Search”) or reordering them (i.e., switching the order of Data Files, Return to Search, and Back) could prove beneficial to how efficiently users engage with the site. This may be an issue that is evaluated with further usability tasks and testing or discussed by the Usability Assessment team.

ONEMercury Results – Opening “View full metadata” in a new tab



Issue: A few users “right clicked” on the “View full metadata” button with the expectation that they could open the metadata record in a new tab (so that they could keep the results in a tab and compare multiple metadata records at once). Opening the record in a new tab was not a presented option.

Recommendation: This additional functionality should be further evaluated or discussed to see if this should be offered. Perhaps the Usability Assessment team can discuss this and if needed additional usability testing could be done related to this issue.

Help Menus

Issue: While many users did not engage with the help menus (other than the one related to relevance), the researcher noticed that there are issues with the information communicated in the help windows. In general, the help information was found to be lacking in clarity, depth, and relation to the site and its function’s described purpose.

Recommendation: The help menus should be further evaluated, reviewed and then the content should be improved to better serve the site’s users.