



International Directory Network (IDN) Report

CEOS WGLSS-52

Remote Meeting, October 19, 2021

Michael Morahan

IDN Coordinator

Michael.P.Morahan@nasa.gov



Outline

- CEOS/IDN Collaborations
 - Current NOAA-IDN Activities
 - Reconciling NOAA TPIO and GCMD keywords
 - ESA FedEO Collaborations
 - ChinaGEOSS new collections
- IDN Developments
 - Related_URL OSDD implementation for IDN granule search
 - Use Constraints fields Usage/Licensing Policy
 - Associated DOIs
 - CEOS Tools records ingested into CMR for IDN
 - UMM-Services/Tools integration into Draft MMT
 - Dynamic CMR STAC browsing support
 - New GCMD Keyword Form
- IDN Metric
 - IDN Homepage Usage
 - IDN Search Portal
 - Draft Metadata Management Tool (MMT)



I. CEOS/IDN Collaborations



Current NOAA-IDN Activities

- IDN has ingested 21,609 NOAA dataset metadata records:
 - 12,949 NOAA Ocean records
 - 8,660 records from other ocean, local and regional, and Paleoclimate divisions
 - IDN Search Portal query:
<https://search.earthdata.nasa.gov/portal/idn/search?q=NOAA NCEI>
- Another ~11,450 records plan to be added after some minor updates for ISO mapping issues.
- IDN pulled the dataset metadata records directly from the NOAA Web Accessible Folders and ingested them into CMR for the IDN.
- The datasets' OpenSearch Description Documents (OSDD) links will be registered for IDN Search Portal granule searches.



Reconciling NOAA TPIO and GCMD keywords

- The GCMD/IDN Team has been working with the NOAA Technology, Planning, and Integration for Observation (TPIO) Team and the USGS to align their keywords more closely with the GCMD Keywords.
- There are several science keywords sets that will go through cross-team review. These include: Atmosphere, Oceans, Sun-Earth Interactions, Terrestrial Hydrosphere, Cryosphere, Solid Earth, Human Dimensions, Land Surface, Biosphere, Spectral/Engineering, Agriculture, Climate Indicators
- The first set reviewed and released were the Atmosphere Keywords as part of the 10.0 version on March 15, 2021. See the keyword release notes at <https://wiki.earthdata.nasa.gov/x/aoMVD>
- The Ocean keywords are currently being reviewed by stakeholders through the NASA ESDIS Standards Office (ESO). These keywords are expected to be released in October 2021.



ESA FedEO Collaborations

- FedEO dataset records were ingested into CMR for the IDN:
 - URL Updates made for 162 ESA, 53 DLR, and 44 VITO dataset records.
 - IDN Search Portal (all FedEO dataset records):
<https://search.earthdata.nasa.gov/portal/idn/search?fpj=FedEO>
- Provided examples to populate the DOIs (for Associated DOIs (input data or services)) and Related_URL for OSDD URL entries.
- Continue to add new FedEO keywords to the GCMD Keyword catalog
 - Updated platform and instrument information for the following: FSSCat, GEO-KOMPSAT-2B, and COSMO-SkyMed Second Generation.
 - GCMD Keyword Viewer: <https://gcmd.earthdata.nasa.gov/KeywordViewer/>
- IDN has received approval to automate CMR ingest between FedEO and IDN.
 - The task will be scheduled for calendar quarter 1 for 2022.



ChinaGEOSS & NRSCC Datasets

- 5 new ChinaGEOSS registered metadata records into the IDN:
 - <https://search.earthdata.nasa.gov/portal/idn/search?fdc=CN/ChinaGEOSS>
- IDN Search Portal offers 24 NRSCC collections' granules:
 - <https://search.earthdata.nasa.gov/portal/idn/search?q=NRSCC> GLASS



II. IDN Developments



Related_URL OSDD implementation for IDN granule search

- CMR has implemented OpenSearch collection-specific, granule search API for a collection through an Open Search Descriptor Document (OSDD) in the collection metadata record.
- Adding the OSDD tag is no longer need to implement OpenSearch collection-specific, granule searches for CEOS providers.
- The UMM-C Related_URL field and sub-fields will be used to populate the OSDD link.
- Metadata providers can populate their collections with the OSDD links using the dMMT (<https://draftmmt.earthdata.nasa.gov/>).



Related_URL OSDD DIF-10 Example

```
<Related_URL>
  <URL_Content_Type>
    <Type>GET CAPABILITIES</Type>
    <Subtype>OpenSearch</Subtype>
  </URL_Content_Type>
  <URL>https://fedeo.esa.int/opensearch/description.xml?parentIdentifier=urn:eop:VITO:CGS_S2_LAI
    &startDate=2015-07-06T00:00:00.000Z&endDate=2021-12-31T23:59:00.000Z</URL>
  <Description>tag_key: opensearch.granule.osdd</Description>
  <MimeType>application/opensearchdescription+xml</MimeType>
</Related_URL>
```



Use Constraints fields Usage/Licensing Policy

- All Providers are encouraged to add Data Usage Policy information, as a link or text using the UseConstraints fields for their IDN datasets.

UMM JSON Example

```
"UseConstraints" : {  
  "LicenseURL" : {  
    "Description" : "ODbL with Database Contents License (DbCL)",  
    "Linkage" : "https://opendefinition.org/licenses/odc-odbl",  
    "MimeType" : "text/html",  
    "Name" : "Data Use Policy"  
  }  
}
```

DIF-10 Example

```
<Use_Constraints>  
  <License_URL>  
    <URL>https://earthdata.nasa.gov/earth-observation-data/data-use-policy</URL>  
    <Title>Data Use Policy</Title>  
    <Description>License URL for data use policy</Description>  
    <Mime_Type>text/html</Mime_Type>  
  </License_URL>  
</Use_Constraints>
```



Associated DOIs

- New fields were added to the UMM-C to give Metadata Providers a way to cite related input datasets or services to their dataset's metadata.
- DIF-10 metadata example:

```
<Associated_DOIs>
```

```
<DOI>10.5067/GPM/MHS/METOPC/3A-DAY/05</DOI>
```

```
<Title>GPM MHS on METOP-C (GPROF) Radiometer Precipitation Profiling L3 1 day 0.25  
degree x 0.25 degree V05 (GPM_3GPROFMETOPCMHS_DAY)</Title>  
<Authority> </Authority>
```

```
</Associated_DOIs>
```

```
<Associated_DOIs>
```

```
<DOI>10.5067/GPM/PRTMI/TRMM/3B-MONTH/06</DOI>
```

```
<Title>GPM PR and TMI on TRMM (Combined Precipitation) L3 1 month 0.25x0.25 degree  
V06 (GPM_3CMB_TRMM) at GES DISC</Title>
```

```
<Authority> </Authority>
```

```
</Associated_DOIs>
```



CEOS Tools records ingested into CMR for IDN

- Unified Metadata Model for Tools (UMM-T) records were created for CEOS tools and ingested into CMR.
- Users can search for CEOS tools by:
 - Short Name:
https://cmr.earthdata.nasa.gov/search/tools.umm_json?name=Proba-V%20MEP&pretty=true
 - Keywords:
<https://cmr.earthdata.nasa.gov/search/tools?keyword=Sentinel%20satellites>
- Users can find more information from the CMR Search API document:
<https://cmr.earthdata.nasa.gov/search/site/docs/search/api.html#tool>



UMM-Services/Tools integration into Draft MMT

<https://draftmmt.earthdata.nasa.gov/>

- Developing roadmap for services and tools into dMMT tasks.
- Tentatively scheduling the start of development for services and tools into dMMT by mid to late 2022..

EARTHDATA CEOS
Metadata Management Tool **NON-NASA USERS BETA**

Enter Search Term Q Search Collections

MANAGE COLLECTION PROPOSALS

In Work Proposals

- 2021-09-14 | USAP-1656126
In Work | New Collection Request
- 2021-09-08 | <Blank Short Name>
In Work | New Collection Request

Queued Proposals

- 2021-09-15 | USAP-1643353
Approved | Update Collection Request
- 2021-09-15 | USAP-1542936
Approved | New Collection Request
- 2021-09-15 | WSE
Submitted | Update Collection Request
- 2021-09-15 | NRSCC_NODA_ZhangHe...
Submitted | Update Collection Request
- 2021-09-15 | NRSCC_NODA_ZhangHe...
Submitted | Update Collection Request
- [More](#)



Dynamic CMR STAC browsing support

- NASA CMR-STAC Usage:
 - Github link: <https://github.com/nasa/cmr-stac/blob/master/docs/usage.md>
 - CMR STAC collection:
https://cmr.earthdata.nasa.gov/stac/POCLOUD/collections/MITgcm_LLC4320_Pre-SWOT_JPL_L4_BassStrait_v1.0.v1.0
 - SnapPlanet client:
<https://rocket.snapplanet.io/map?u=https://cmr.earthdata.nasa.gov/stac/LPCLOUD>
 - CMR-STAC WIKI documentation (examples and video demo):
<https://wiki.earthdata.nasa.gov/display/ED/CMR+SpatioTemporal+Asset+Catalog+%28CMR-STAC%29+Documentation>



GCMD Keyword Update

- New GCMD Keyword Forum:
<https://forum.earthdata.nasa.gov/app.php/tag/GCMD+Keywords>
 - Forum lets GCMD metadata providers request new or updates to the GCMD Keywords and allows users to provide feedback and comments.
 - Forums User Guide:
<https://forum.earthdata.nasa.gov/docs/assets/sitedocs/userguide.pdf>
- GCMD Keyword Releases:
 - Version 11 release:
<https://wiki.earthdata.nasa.gov/pages/viewpage.action?pageId=219185711>
 - Updates for Related_URL type, New Projects, Instruments, and Platforms.
 - All releases:
<https://wiki.earthdata.nasa.gov/display/ED/Keyword+Release+Announcements>



III. IDN Metrics

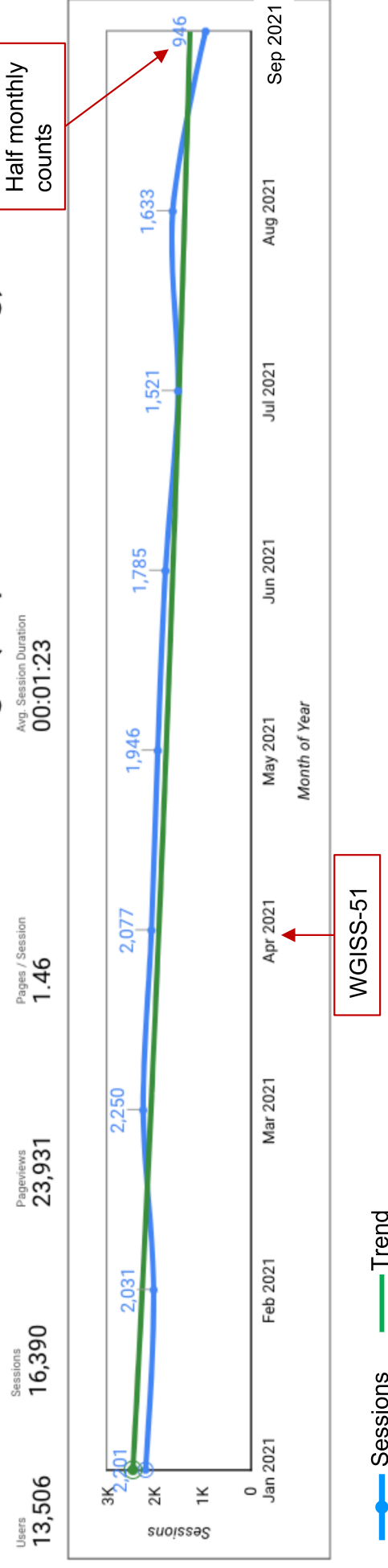


IDN Homepage Usage

(January 2021 to September 15, 2021)

(<https://idn.ceos.org/>)

Year Overview of IDN Home Page (<https://idn.ceos.org>)



- **User:** An individual person browsing the website.
- **Sessions:** A single visit to the website, consisting of one or more pageviews.
- **Pageviews:** A pageview is reported when a page has been viewed by a user on the website.
- **Pages/Session:** the average number of pageviews in each session.
- **Avg. Session Duration:** how long users are spending on your website.
- **Bounce Rate:** is the percentage of sessions with only one interaction

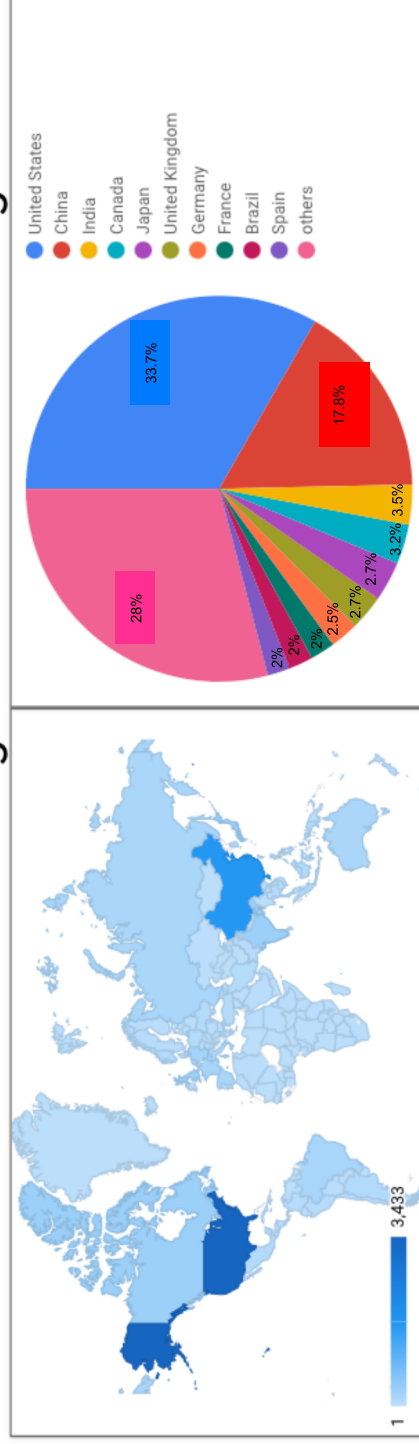


IDN Homepage Usage (continue)

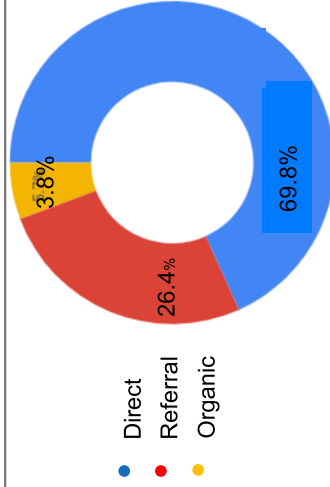
(January 2021 to September 15, 2021)

(<https://idn.ceos.org/>)

Where are users coming from for IDN Home Page?



How are users finding the IDN?



- **Direct:** includes people who typed your website's URL into their browser or clicked a link in an email application.
- **Referral:** A referral is reported when a user clicks through to your website from another third-party website.
- **Organic:** refers to people clicking on a free link from a search results page. For example, people clicking through to your website from a free result on a Google search results page.

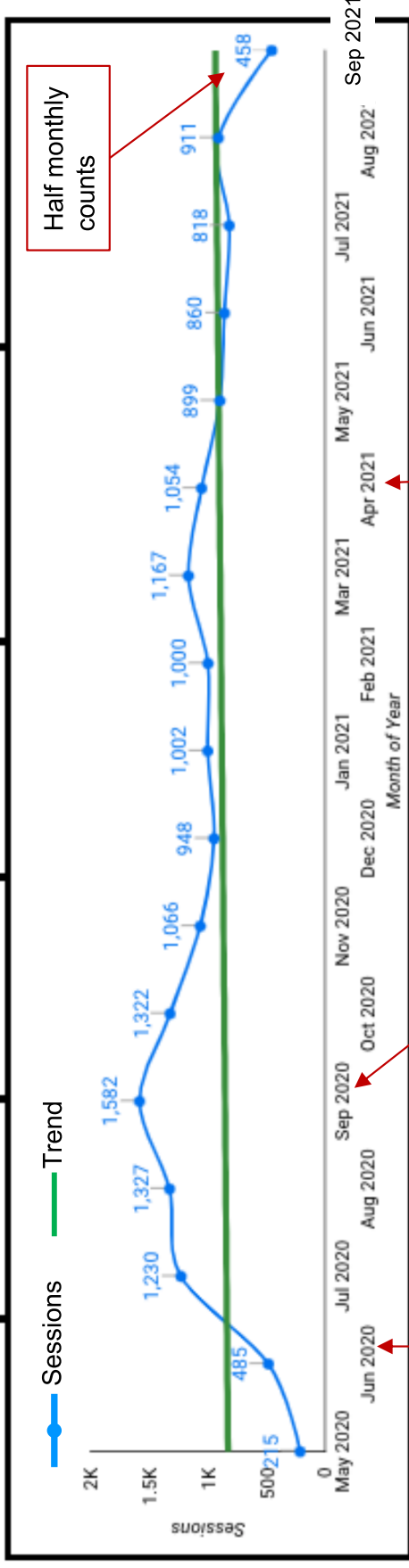


IDN Search Portal Usage

(May 2020 to September 15, 2021)
(<https://search.earthdata.nasa.gov/portal/idn/search>)

Year Overview

Users	Sessions	Pageviews	Pages / Session	Avg. Session Duration	Bounce Rate
10,150	12,398	28,161	2.27	00:04:33	32.29%





IDN Search Portal Usage

(September 2020 to September 15, 2021)

(<https://search.earthdata.nasa.gov/portal/idn/search>)

Page	Users	Pageviews	Sessions
search.earthdata.nasa.gov/portal/idn/search	10922	19470	12053
search.earthdata.nasa.gov/portal/idn/search/granules	5876	8690	842
search.earthdata.nasa.gov/portal/idn/projects	857	1297	85
search.earthdata.nasa.gov/portal/idn/downloads	764	948	107
search.earthdata.nasa.gov/portal/idn/preferences	26	16	0
Total	18445	30421	13087

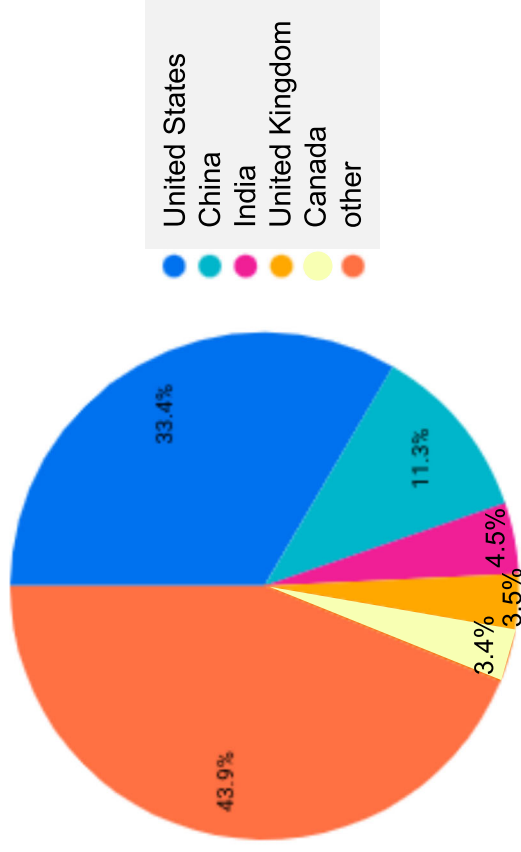


IDN Search Portal Usage

(September 2020 to September 15, 2021)

(<https://search.earthdata.nasa.gov/portal/idn/search>)

Where are users coming from?





Draft MMT Usage: April 2021 to September 20, 2021

<https://draftmmt.earthdata.nasa.gov>

DraftMMT Usage from September 2020 to February 2021.

User	Unique Login	Total Logins
IDN Metadata Author	47	162
IDN Approver	2	137

Break down of Drafts created, submitted, and approved.

	Created	Submitted	Approved
New Draft Proposals	102	93	90
Update Collections	27	27	22

- Draft MMT will only save unsubmitted collection metadata for 30 days.



Questions

Please provide questions/comments to:

michael.p.morahan@nasa.gov (KBR)
valerie.dixon@nasa.gov (NASA)



Background Slides



Useful Links

- **International Directory Network (IDN)**
 - <https://idn.ceos.org/>
- **International Directory Network (IDN) Search Portal**
 - <https://search.earthdata.nasa.gov/portal/idn/search>
- **EarthData Login**
 - <https://urs.earthdata.nasa.gov/home>
- **Draft MMT**
 - <https://draftmmt.earthdata.nasa.gov/>
 - **Draft Metadata Management Tool (dMMT) User's Guide**
 - <https://wiki.earthdata.nasa.gov/display/CMR/Draft+Metadata+Management+Tool+%28dMMT%29+User%27s+Guide>



Useful Links (continue)

- **GCMD Keywords**
 - <https://earthdata.nasa.gov/earth-observation-data/find-data/gcmd/gcmd-keywords>
- **GCMD Keyword Viewer**
 - <https://gcmd.earthdata.nasa.gov/KeywordViewer/>
- **New KMS URLs**
 - GET Capabilities
 - <https://gcmd.earthdata.nasa.gov/kms/>
 - All Science Keyword in CSV format
 - https://gcmd.earthdata.nasa.gov/kms/concepts/concept_scheme/sciencekeywords?case=native&format=csv



Useful Links (continue)

- UMM-C, UMM-G, UMM-S, UMM-T, UMM-V Documents
 - <https://wiki.earthdata.nasa.gov/display/CMR/CMR+Documents>
- CMR Collection Metadata Schemas
 - <https://git.earthdata.nasa.gov/projects/EMFD>
- CMR Search API
 - <https://cmr.earthdata.nasa.gov/search/site/docs/search/api.html>
- CMR OpenSearch Documentation
 - <https://cmr.earthdata.nasa.gov/opensearch/home/docs>