Importance of Data Quality Information at the Discovery Level: Assisting Users in Determining Potential Value and Reliability of Data

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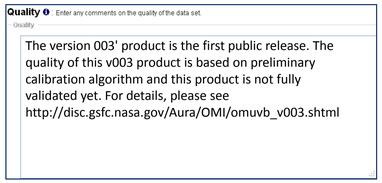
Federation of Earth Science Information Partners
MAKING DATA MATTER
GCMD - ESIP Type I Partner

Introduction

Offering quality information for data sets at the data discovery/collection level provides value for users in determining known limitations for the data sets offered through NASA's Global Change Master Directory (GCMD). Subsequently, users can make more informed decisions regarding the value and confidence in their data sets of choice. Holding open dialogues with the community and gauging users' needs for evaluating data quality are critical aspects of providing significant and useful information for the user. We seek to gain feedback from our user community, which is critical in integrating useful modifications to the Directory Interchange Format (DIF) metadata.

Quality Representation in the Directory



docBUILDER is an online metadata authoring tool for describing Earth science data, services, and climate diagnostics.

The existing **Quality field** is free-text and allows authors to provide information about the quality of the data or any quality assurance procedures followed in producing the data. Suggestions for information to include in the **Quality** field are:

- Indicators of data quality or quality flags
- Recognized or potential problems with quality
- Established quality control mechanisms
- Established quantitative quality measurements

Quality Field Populated

Quality LOGICAL CONSISTENCY REPORT: Since similar products are produced from the SSMI, NESDIS/ORA has more than a decade of experience in SSMI product verification and validation. Thus, for all products, comparable SSMI products are one verification source. SSMI data are used both for near-real time product monitoring and for product validation and verification. An even-increasing suite of in-situ, remotely-sensed, and model-output data are being used in product validation and verification.

COMPLETENESS REPORT TBD

LINEAGE/PROCESS STEP:
PROCESS DESCRIPTION: AMSU-B Mapped Orbital Products (MOP) subsystem process is as follows: read the old sixteenth-mesh polar-stereographic grid file; read the new AMSU-A Swath files to get the required products; assign the data to AMSU-B FOVs; read the new AMSU-B Swath files; update the sixteenth-mesh PS arrays of data; and write the updated arrays to the HDF-EOS Grid file.
SOURCE USED CITATION ABBREVIATION: AMSUA_SWATH
SOURCE USED CITATION ABBREVIATION: AMSUB_SWATH
PROCESS DATE: Not complete
SOURCE PRODUCED CITATION ABBREVIATION: gov.noaa.class:MSPPS_FXAR

LINEAGE/SOURCE INFORMATION:
ORIGINATOR: DOC/NOAA/NESDIS > National Environmental Satellite, Data, and Information Service, NOAA, U.S. Department of Commerce .

LINEAGE/SOURCE INFORMATION:
ORIGINATOR: DOC/NOAA/NESDIS > National Environmental Satellite, Data, and Information Service, NOAA, U.S. Department of Commerce .

LINEAGE/SOURCE INFORMATION:
ORIGINATOR: DOC/NOAA/NESDIS/OSDPD > Office of Satellite Data Processing and Distribution, NESDIS, NOAA, U.S. Department of Commerce .
TITLE: AMSU-A Level 2 Orbital Swath dataset .
TITLE: AMSU-B Level 2 Orbital Swath dataset .
TITLE: MSPPS Mapped Data .
PUBLICATION DATE: 1998-10-26.
PUBLICATION DATE: 1998-10-26.
PUBLICATION DATE: 1998-10-26.
PUBLICATION DATE: 2003-07-12.
GEOSPATIAL DATA PRESENTATION FORM: raster digital data .
ONLINE LINKAGE: http://www.osdpd.noaa.gov/PSB/IMAGES/MSPPS_day2.html .
ONLINE LINKAGE: http://www.class.noaa.gov/nsaa/products/search?sub_id=0&datatype_fa... .

LINEAGE/SOURCE INFORMATION:
ORIGINATOR: DOC/NOAA/NESDIS > National Environmental Satellite, Data, and Information Service, NOAA, U.S. Department of Commerce .

LINEAGE/SOURCE INFORMATION:
ORIGINATOR: DOC/NOAA/NESDIS > National Environmental Satellite, Data, and Information Service, NOAA, U.S. Department of Commerce .

LINEAGE/SOURCE INFORMATION:
ORIGINATOR: DOC/NOAA/NESDIS/OSDPD > Office of Satellite Data Processing and Distribution, NESDIS, NOAA, U.S. Department of Commerce .
TITLE: AMSU-A Level 2 Orbital Swath dataset .

Analyze Existing Quality Information in the Directory

The "word cloud" above illustrates how people are/are not using the quality field within the DIF. 61% of the DIFs in the directory have the Quality field populated.

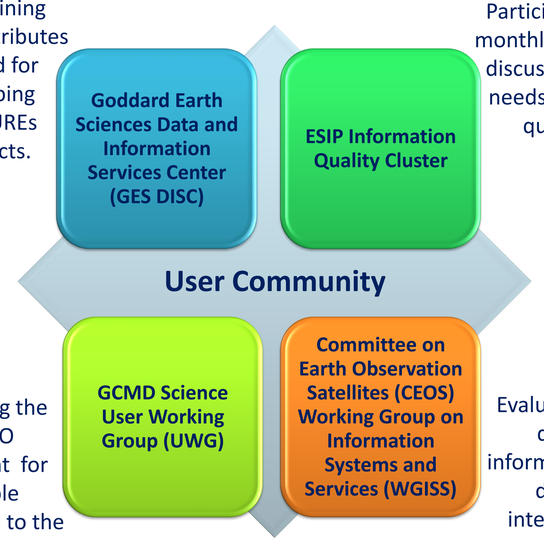
Determine Possible Quality Information That Can Be "Normalized" To Assist in Data Discovery

Using information from this research and the FGDC and ISO standards, we plan to add "sub-fields" within data quality to help guide users in providing useful quality information for data discovery.

Collaboration and Feedback

Determining quality attributes needed for describing MEaSUREs products.

Participating in monthly telecons discussing user needs for data quality.



Reviewing the QA4EO document for possible integration to the DIF structure.

Evaluating data quality information from diverse international partners.

We continue to seek feedback on how you describe data quality.

Please leave your comments or send us an email.

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