1   Status of this Memo

This memo provides information to the NASA Earth Science Data Systems (ESDS) community.   This memo does not specify an ESDS standard of any kind. Distribution of this memo is unlimited.

2   Change Explanation

This RFC provides information about changes being made to the GCMD DIF described in ESDS-RFC-012.

3   Copyright Notice

4   Abstract

This document describes modifications to the Directory Interchange Format (DIF) according to International Directory Network Version 9.8.2 Release Notes, October 2010. The Global Change Master Directory (GCMD) is an implementation of the DIF.

5   Table of Contents

6 Introduction

The International Directory Network Version 9.8.2 Release Notes contains modifications to the Directory Interchange Format (DIF) that will allow for improved interoperability with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM) and the International Organisation for Standardisation (ISO) 19115 metadata standards.

7 Our Work

The Global Change Master Directory (GCMD) database holds more than 24,000 descriptions of Earth science data sets and services covering all aspects of Earth and environmental sciences. From the GCMD web site, one can use the search box or select from the available keywords to search for data and services.

The GCMD offers authoring tools, which conform to international standards. The web-based docBUILDER tool allows metadata authors to add or modify data set descriptions (DIFs). Tools are available to write, directly submit, and directly update metadata records. In addition, Subscription services are available to notify users of new entries.

The GCMD offers descriptions of Earth science data sets using a specified set of information - known as the Directory Interchange Format (DIF). The GCMD's philosophy for using the DIF is that the specific set of attributes, the content metadata, is the critical set needed for a user to determine if the data sets returned from a database query are those that define viable data sets for the user's needs. Using a specific set of fields also helps to "normalize" the search for data sets through the use of several alternative search engines.

7.1   DIF Changes – Release Notes 9.8.2

The DIF will be undergoing modifications to improve metadata transformations with other well-known formats. The DIF Summary field will no longer be free-text and is restructured to contain sub-fields which will allow one-to-one mapping with FGDC CSDGM and ISO 19115 standards. For example, the Summary field will now have sub-fields Abstract and Purpose which will map directly to fields in the FGDC CSDGM and ISO 19115. Metadata authors of existing records are not required to perform any additional editing as the text in the Summary fields will be automatically mapped to the new format. When creating new records, authors **must** use the new Summary field; Abstract is **required** and Purpose is optional. For a detailed description of this modification, see GCMD Release Notes 9.8.2 [1].

The DIF Reference field will still exist as free-text, but will now also be offered as a structured set of sub-fields, which will allow one-to-one mapping with FGDC CSDGM and ISO 19115 standards. For example, the Reference field will now have several sub-fields such as Author and Publication Date, which will map directly to fields in the FGDC CSDGM and ISO 19115. Metadata authors will have the choice of either using the new format or continuing with the old format for existing or new records. Therefore if a user submits a DIF in the 9.8.1 format, it will be accepted and validated. Metadata authors are encouraged, but not required, to utilize the subfields when developing new metadata. When editing pre-existing documents, the free-text box and the subfields will be available simultaneously in docBUILDER for those authors who wish to transfer their citations to the new format. DIF providers who do not use docBUILDER are strongly recommended to begin adapting their systems to the 9.8.2 DIF XML schema. The schema is available online at http://gcmd.nasa.gov/Aboutus/xml/dif/dif.xsd [2]. For a detailed description of this modification, see GCMD Release Notes 9.8.2 [1].

For information on all fields of the DIF, access the DIFGuide document [3].

7.2   GCMD Homepage & DIF DocBuilder Tool
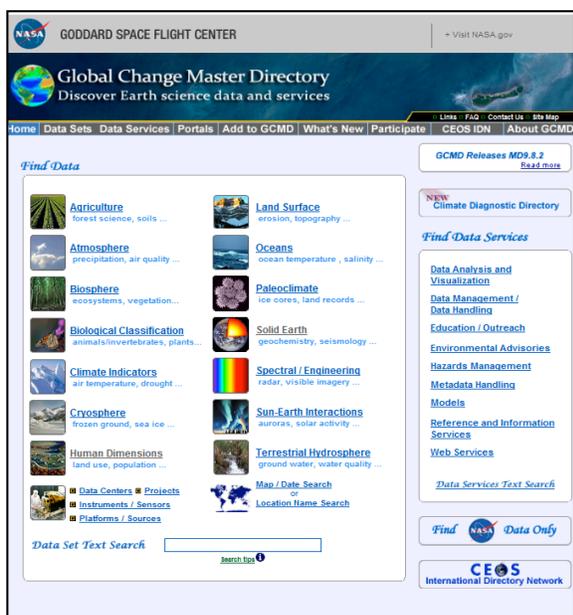
Figure 1. GCMD Homepage
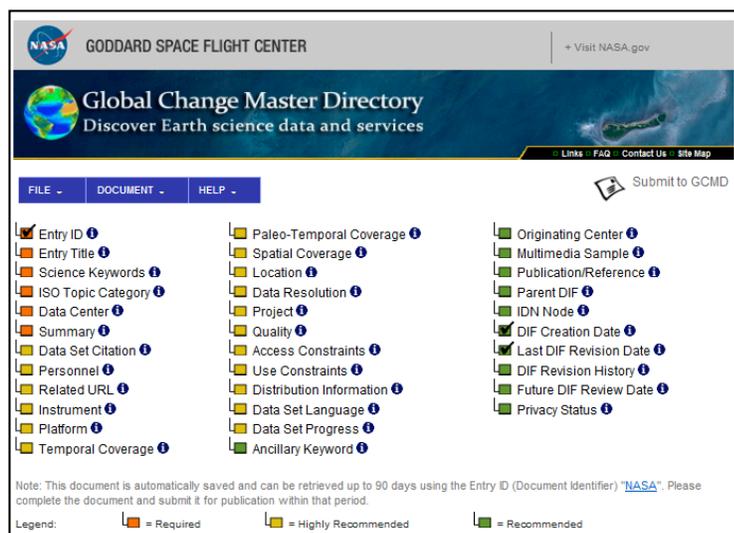
Figure 2. DIF DocBUILDER

8   References

Normative References

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3. Directory Interchange Format (DIF) Writer's Guide, 2008. Global Change Master Directory. National Aeronautics and Space Administration. [http://gcmd.nasa.gov/User/difguide/].

4. Olsen, L.M., G. Major, K. Shein, J. Scialdone, R. Vogel, S. Leicester, H. Weir, S. Ritz, T. Stevens, M. Meaux, C.Solomon, R. Bilodeau, M. Holland, T. Northcutt, R. A. Restrepo, 2007. NASA/Global Change Master Directory (GCMD) Earth Science Keywords. Version 6.0.0.0.0

5. Olsen, L.M., C. Chiddo. 2008. ESDS-RFC-012v0.2: Directory Interchange Format (DIF) Standard. National Aeronautics and Space Administration.

Informative References

6. GCMD Main Web Page: http://gcmd.nasa.gov/index.html

7. GCMD Data Sets docBuilder: http://gcmd.nasa.gov/DocumentBuilder/Home.do?Portal=GCMD&MetadataType=0

8. GCMD Portal Index: http://gcmd.nasa.gov/Data/portal_index.html

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10 Appendix A

Glossary of acronyms

Acronym	Description
CSDGM	Content Standard for Digital Geospatial Metadata
DIF	Directory Interchange Format
GCMD	Global Change Master Directory
ISO	International Organisation for Standardisation