DIF10 and ECHO10 Metadata Elements that do not Map to the UMM

Introduction

ECHO10 and DIF10 are two CMR supported metadata standards. While the majority of the metadata elements in DIF10 and ECHO10 translate to the Unified Metadata Model (UMM), there are a few elements in both standards that do not translate. These elements are listed on this page. While information can still be stored in these metadata elements in a local database, the information contained within will not be translated when submitted to the CMR.

DIF10 Elements that do not Map to the UMM

The Directory Interchange Format (DIF) metadata standard is designed to support the NASA Global Change Master Directory (GCMD) data catalog, and is also supported by the CMR.

The table below summarizes DIF version 10 (DIF10) metadata elements, which is the most current and widely supported version of DIF, that do not translate to the UMM.

DIF10 Metadata Element Path	Description	Equivalent ECHO10 Metadata Element
Originating_Metadata_Node	This element is a unique value that consists of the metadata record's Entry ID and Version ID. The CMR does not leverage the Originating_Metadata_Node field, but rather the Short Name and Version ID fields to identify uniqueness between records. Specifically, the Short Name and Version ID combination must be unique per metadata provider in the CMR.	n/a
DIF_Revision_History	This is a free text field that can be used to track any changes/revisions made to the DIF metadata record.	n/a
Organization /Dataset_ID	The "Organization" concept describes the data center, organization, or institution responsible for creating, processing, distributing and/or archiving the data. "Organization" maps to the "Data Center" concept in the UMM. This particular sub-field, Organization/Dataset_ID, does not not map to any UMM element. The Organization /Dataset_ID denotes the ID of the dataset.	n/a
Reference /Citation	The "Reference" element contains key bibliographic citations pertaining to the dataset. "Reference" maps to the "Publication Reference" concept in the UMM. The specific DIF10 field "Reference/Citation" allows for a single block of text to provide an entire citation. This field does not map to the UMM, rather, Reference fields which describe individual pieces of a citation are mapped from DIF10 to the UMM (Reference/Author, Reference/Publication_Date, Reference/Title, etc.). For additional information on providing references in the metadata, please see the Publication Reference wiki page.	n/a
Multimedia_Sample /Format	"Multimedia_Sample" allows for a sample image, movie or sound clip to be provided within the metadata record. The "Multimedia_Sample/Format" field identifies the format of the multimedia sample file (which may differ from the format of the data files), i.e. GIF, TIFF, JPEG. The Multimedia Sample Format information does not translate to a UMM concept. The other Multimedia_Sample elements map to the "Related URL" concept in the UMM.	n/a
Multimedia_Sample /Caption	"Multimedia_Sample" allows for a sample image, movie or sound clip to be provided within the metadata record. The "Multimedia_Sample/Caption" field provides a one-line description of the multimedia sample to be used as a caption when the sample is displayed. The "Multimedia_Sample/Caption" field does not map to the UMM, however, the "Multimedia_Sample/Description" field does map. Therefore, the "Multimedia_Sample/Description" should be leveraged either in place of, or in addition to, the "Caption" field in order to describe the multimedia sample file.	n/a
Temporal_Coverage /Time_Type	"Temporal_Coverage" describes the time period during which data were collected. The "Temporal_Coverage /Time_Type" field provides the time system used to describe the data (e.g. Universal Time). There is no equivalent concept in the UMM. For additional information about Temporal_Coverage, please refer to the Temporal Extent wiki page.	Temporal /TimeType
Temporal_Coverage /Date_Type	"Temporal_Coverage" describes the time period during which data were collected. The "Temporal_Coverage /Date_Type" field specifies the type of date represented (e.g. Eastern Daylight). There is no equivalent concept in the UMM. For additional information about Temporal_Coverage, please refer to the Temporal Extent wiki page.	Temporal /DateType
Data_Resolution /Temporal_Resolution	The "Data_Resolution/Temporal_Resolution" field provides the frequency of data sampled. The Temporal Resolution is a text field and should include units, if applicable (e.g. Daily; Two day repeat observations with a repeat orbit pattern every 16 days; 1.5 hours). There is no equivalent concept currently in the UMM.	n/a

Data_Resolution /Temporal_ Resolution_ Range	The "Data_Resolution/Temporal_Resolution_Range" field must be selected from a controlled vocabulary list of temporal resolution ranges, which are chosen based on the provided temporal resolution of the dataset. The GCMD Temporal Resolution keyword list controls the values for this field (e.g. Weekly Climatology; Weekly - < Monthly).	n/a
Metadata_N ame	This element identifies the name of the metadata schema used to create the metadata (e.g. CEOS IDN DIF).	MetadataStan dardName
Metadata_V ersion	This element identifies the version of the metadata schema used to create the metadata (e.g. Version 10.2).	MetadataStan dardVersion
Product_Flag	This field identifies the types of files provided in the dataset and must be selected from the following enumeration list : ["DATA PRODUCT FILE", "INSTRUMENT ANCILLARY FILE", "SYSTEM/SPACECRAFT FILE", "EXTERNAL DATA"]. This field was made optional in DIF Version 10.2.	ProductFlag
Related_UR L/Title	The title of a URL resource provided in a metadata record. The "Related_URL/Title" field does not map to the UMM, however several other Related_URL fields do map. For additional information, please see the Related URLs wiki page.	OnlineResour ces /OnlineResou rce/MimeType
Related_UR L /Mime_Type	MIME stands for "Multipurpose Internet Mail Extensions". Mime types are used to identify the nature and format of files provided on the Internet, and are typically used by internet browsers in order to determine how to properly process or display a document or file. The "Related_URL/Mime_Type" field identifies the mime type of a URL being provided in the metadata. While this specific field does not map to the UMM, the Mime Type concept is supported by the UMM. For additional information, please see the Related URLs: GET DATA wiki page.	n/a
Related_UR L/Protocol	This element identifies the protocol of a URL provided in the metadata, such as http:// or https://	n/a

ECHO10 Elements that do not Map to the UMM

The Earth Observing System (EOS) Clearinghouse (ECHO) metadata standard was originally designed for submitting metadata to the ECHO system. The ECHO system has since been retired and replaced with the Common Metadata Repository (CMR). The ECHO metadata model remains valid and is still supported by the CMR.

The table below summarizes ECHO10 metadata elements that do not translate to the UMM.

ECHO10 Metadata Element Path	Description	Equivalent DIF10 Metadata Element (see below)
LongName	The "LongName" element identifies the reference name used indescribing the scientific contents of the data collection. This is often similar to the title of the dataset, which is provided in the ECHO10 "DataSetId" field. The UMM maps to the "DataSetId" field but not the LongName field. Therefore, the formal title of the dataset should be provided in the DataSetId field. For additional information, please see the Entry Title wiki page.	n/a
Temporal /TimeType	This element provides the time system which the values found in temporal sub-classes represent (e.g. Universal Time). There is no equivalent concept in the UMM. For additional information about Temporal elements, please refer to the Temporal Extent wiki page.	Temporal_Co verage /Time_Type
Temporal /DateType	This element specifies the type of date represented by the value in the date attributes of the temporal subclasses (e. g. Eastern Daylight). There is no equivalent concept in the UMM. For additional information about Temporal elements, please refer to the Temporal Extent wiki page.	Temporal_Co verage /Date_Type
MetadataSt andardName	The name of the chosen metadata standard for the dataset (e.g. ECHO10).	Metadata_Na me
MetadataSt andardVersi on	The version of the chosen metadata standard for the dataset (e.g. Version 10).	Metadata_Ver sion
ProductFlag	This element identifies the types of files provided in the dataset and must be selected from the following enumeratio n list: ["DATA PRODUCT FILE", "INSTRUMENT ANCILLARY FILE", "SYSTEM/SPACECRAFT FILE", "EXTERNAL DATA"]	Product_Flag
Orderable	Indicates whether the dataset is orderable, using a boolean value (e.g. true/false; 0/1). This field was utilized by the Reverb Echo data catalog but is not needed for the CMR, which is why no equivalent element is provided in the UMM.	n/a

Visible	Indicates whether the collection is visible or not. Visibility is a basic access control mechanism that bypasses all ACL rules. If a collection is not visible, only users with the owning provider role will be able to see the item. All other users will not see the item no matter what ACL permissions are in place. If group based permissions are needed, use the restriction flag field instead of visibility. Normally visibility is used when an item is first ingested. Making the item not visible allows the provider time to install any ACL rules or order options required before users will see the item. Visibility is more commonly set at the collection level than the granule level. If a collection is not visible, none of the granules in the collection will be visible. For additional information on Restriction Flags and how to manage visibility of datasets in the CMR, please see the Access Constraints wiki page and the 5th chapter of the CMR Data Partner User Guide: https://wiki.earthdata.nasa.gov/display/CMR /CMR+Data+Partner+User+Guide#CMRDataPartnerUserGuide-Chapter5:The4thStep-DataManagement	n/a
Maintenanc eAndUpdate Frequency	The frequency with which changes and additions are made to the collection after the initial dataset begins to be collected/processed. This is a free text field with a chracter limit of 80 characters.	n/a
CSDTDescri ptions /CSDTDesc ription /PrimaryCS DT	This element describes the data organization of the collection (i.e. a generalized collection Description in terms of internal structure). There are many possible structures. All should be describable by one of the PrimaryCSDTs (fixed domain), but the specific implementation has an unbounded domain indicating the range at the lower structured level. While many CSDTs may exist in a granule, only the primary or dominant CSDT is described (e.g. PrimaryCSDT = swath, Implementation = HDF-EOS). The indirect reference is used for collection specific data organization labels. A comment field is provided for further explanation. The PrimaryCSDT element provides the name of the CSDT type of data organization (data type and sub type). Computer Science Data Types are the physical storage types required to support Earth Science Data Types (ESDTs), the logical objects seen in pyramid views.	n/a
CSDTDescri ptions /CSDTDesc ription /Implementa tion	The name of the implemented form of the CSDT (standard formats, industry standards etc.), including lowest level object description.	n/a
CSDTDescri ptions /CSDTDesc ription /CSDTCom ments	A free text field for the user to add comments clarifying the data structure.	n/a
CSDTDescri ptions /CSDTDesc ription /IndirectRef erence	Name of object by which data are organized. Name is the ESDT related or other local name other than the formal CSDT reference. i.e. 2.5 degree bins for CERES, 5 degree bins for CERES, and source packets for level 0.	n/a
OnlineReso urces /OnlineReso urce /MimeType	MIME stands for "Multipurpose Internet Mail Extensions". Mime types are used to identify the nature and format of files provided on the Internet, and are typically used by internet browsers in order to determine how to properly process or display a document or file. Providing the Mime Type element in the metadata helps ensure that the URL contents will be properly displayed on the Web. Mime Type is an optional sub-field. While this specific field does not currently map to the UMM, the Mime Type concept is supported by the UMM. For additional information, please see the Related URLs: GET DATA wiki page.	Related_URL /Mime_Type
AlgorithmPa ckages /AlgorithmP ackage /Name	The AlgorithmPackage entity provides the common characteristics of the algorithm used in product generation. The Name element specifies the name given to the complete delivered package submitted for algorithm integration and test.	n/a
AlgorithmPa ckages /AlgorithmP ackage /Version	The Version specifies the version of the full package being delivered.	n/a
AlgorithmPa ckages /AlgorithmP ackage /Description	A description of the algorithm package.	n/a

SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/ PlanarCoor dinateSyste m /PlanarCoor dinateSyste mId	The Planar Coordinate System entity holds a list of eligible planar coordinate systems for the dataset. The Planar Coordinate System Id identifies the reference ID of the planar coordinate system. This ID should be unique per data provider. The Planar Coordinate System concept does not translate to the UMM or the CMR.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/ PlanarCoor dinateSyste m /PlanarCoor dinateInform ation	This element holds information describing the chosen planar coordinate system (e.g., distance units, encoding method, etc.)	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms /PlanarCoor dinateSyste m/ PlanarCoor dinateInform ation /DistanceUn its	Units of measure used for planar coordinate description distances.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms /PlanarCoor dinateSyste m/ PlanarCoor dinateInform ation /EncodingM ethod	The means used to encode measurements for the Planar Coordinate System.	n/a

SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ PlanarCoor dinateInform ation/ DistanceAn dBearingRe presentation /DistanceRe solution	The DistanceAndBearingRepresentation holds information about the distance and bearing representation of the dataset (e.g., distance resolution, bearing resolution, etc.) The DistanceResolution is the minimum distance measurable between two points, expressed in Planar Distance Units of measure.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ PlanarCoor dinateInform ation/ DistanceAn dBearingRe presentation /BearingRes olution	The DistanceAndBearingRepresentation holds information about the distance and bearing representation of the dataset (e.g., distance resolution, bearing resolution, etc.) The BearingResolution is the minimum angle measurable between two points, expressed in Bearing Units of measure (see below).	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ PlanarCoor dinateInform ation/ DistanceAn dBearingRe presentation /BearingUnits	The DistanceAndBearingRepresentation holds information about the distance and bearing representation of the dataset (e.g., distance resolution, bearing resolution, etc.) The BearingUnits is the unit of measure used for angles.	n/a

SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ PlanarCoor dinateInform ation/ DistanceAn dBearingRe presentation /BearingRef erenceDirec tion	Direction from which the bearing is measured clockwise.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ PlanarCoor dinateInform ation/ DistanceAn dBearingRe presentation /BearingRef erenceMeridi an	Axis from which the bearing is measured.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ PlanarCoor dinateInform ation/ Coordinate Representat ion /AbscissaRe solution	The CoordinateRepresentation entity holds information about the coordinate representation of the dataset (e.g., abscissa resolution, ordinate resolution, etc.) The AbscissaResolution is the (nominal) minimum distance between the 'x' or column values of two adjacent points, expressed in Planar Distance Units of measure. Planar Distance Units of measure are units for distances whose domain values are meters, international feet, and survey feet.	n/a

SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ PlanarCoor dinateInform ation/ Coordinate Representat ion /OrdinateRe solution	The OrdinateResolution is the (nominal) minimum distance between the 'y' or row values of two adjacent points, expressed in Planar Distance Units of measure. Planar Distance Units of measure are units for distances whose domain values are meters, international feet, and survey feet.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ MapProjecti on /MapProjecti onName	The MapProjection entity holds information about the map projection used for the dataset, within a Planar Coordinate System. The MapProjectionName identifies the name of the systematic representation of all or part of the surface of the Earth on a plane or developable surface.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ MapProjecti on /MapProjecti onPointer	The MapProjectionPointer is a data modeling logical reference to a map projection.	n/a
SpatialInfo /HorizontalC oordinateSy stem/ PlanarCoor dinateSyste ms/PlanarC oordinateSy stem/ LocalPlanar CoordinateS ystem /Description	The LocalPlanarCoordinateSystem is a Planar Coordinate System unique to a local region or area. This element provides a description of the local planar coordinate system and geo-reference information.	n/a

SpatialInfo/HorizontalCoordinateSystem/ PlanarCoordinateSystems/PlanarCoordinateSystem/ LocalPlanarCoordinateSystem/GeoReferenceInformation	A description of the information provided to register the local system to the Earth (e.g. control points, satellite ephemeral data, and inertial navigation data).	n/a
SpatialInfo/HorizontalCoordinateSystem/ PlanarCoordinateSystems/PlanarCoordinateSystem/ GridCoordinateSystemName	This attribute contains the name of a local grid coordinate system.	n/a