## **UMM-C Version History**

Version	Date	What Changed	Issue Number
1.16.2	4/7 /2021	LicenseUrl was changed to LicenseURL. Description was change to a String. Use Constraints was added to ECHO 10, Use Constraints was changed in DIF 10 to allow for License_URL and License_Text.	CMR-7183
1.16.1	4/7 /2021	Added "AssociatedDOIs" to UMM-C as a new main element. Added DoiDoiType for publication DOIs. Added a new enum called "Unknown" to MissingReason.	ECSE-931
1.16.0	3/24 /2021	Added DirectDistributionInformation element with 4 sub elements.	ECSE-930
1.15.5	12/3 /2020	Remove Related URL > Get Data > Data Format Enum Values From UMM-C schema (now KMS validated)	ECSE-912
1.15.4	9/18 /2020	Added "Military Grid Reference System" to TilingIdentificationSystemName Enumeration.	ECSE-846
	10/14 /2020 Product ion		CMR-6647
1.15.3	7/1 /2020	Added a new element called FormatDescription to FileArchive and FileDistribution Information Types.	ECSE-823
	8/7 /2020 Product ion		CMR-6366
1.15.2	5/20 /2020	Added Statute Miles, Nautical Miles, and Not provided as valid values to the HorizontalDataResolutionUnitEnum element. Also Simplified VariesResolution and PointResolution by removing the non needed HorizontalResolutionProcessingLevelEnum sub element.	ECSE-814 CMR-6271
1.15.1	3/25	Add DEPRECATED enumeration to CollectionProgress.	CMR-6174
	/2020		CMR-6176
1.15.0	2/26 /2020	Changed the HorizontalDataResolutions element to HorizontalDataResolution and added sub element objects to aid in more clearer error messages when users make schema mistakes. Before the JSON schema validator spewed a lot of misleading error messages making it hard to figure out what the user did wrong.	CMR-6099 CMR-2530
		Added a description for AdditionalAttributes/Name so that the help text shows up in MMT.	
1.14.0	10/21 /2019 4/12 /2019 Product ion	<ul> <li>Changed the order of elements, the UMM-C definition comes first then followed by the class definitions. The umm-c-json-schema_v1.13_order_change.json file was created to show the changes from v1.13 to include only the element order changes.</li> <li>Moved TilingIdentificationSystem and SpatialExtent from umm-cnn to umm-c. The umm-c-json-schema_v1.         13_order_changed_combined.json file was created to show the changes moving the TilingIdentificationSystem and SpatialExtent and of their child classes from umm-cnn to umm-c. The TilingIdentificationSystem, the SpatialExtent, and their classes were all removed from umm-cmn-json-schema.json file.     </li> <li>Removed IdType from umm-cmn-json-schema.json because it was not referenced anywhere.</li> <li>Starting from the umm-c-json-schema_v1.13_order_changed_combined.json file the following changes were made to produce the umm-c-json-schema.json file:</li> </ul>	CMR-5927
		Removed the HorizontalCoordinateSystem element from SpatialInformationType class	
		2) Added the ResolutionAndCoordinateSystem element with the ResolutionAndCoordinateSystemType definition to the HorizontalSpatialDomainType class.	
		3) Renamed HorizontalCoordinateSystemType class to ResolutionAndCoordinateSystemType.	
		4) Added the description element to the ResolutionAndCoordinateSystemType class	
		5) Removed the GeographicCoordinateSystem element and its class (GeographicCoordinateSystemType)	
		6) Added HorizontalDataResolutions element with the HorizontalDataResolutionType definition to the ResolutionAndCoordinateSystemType class and allowing multiple instances of this class.	
		7) The new HorizontalDataResolutionType class contains 7 choices with up to 8 new elements.	
1.13.0	04/11 /2019	Added ArchiveAndDistributionInformation that replaced the old DistributionType and FileSizeType.	CMR-4908 CMR- 5481 is the EPIC
1.12.0	01/22 /2019	Added 4 new Related URL keywords UMM-C: Get Data > IceBridge Portal, Subscribe, Order, GoLIVE Portal	CMR-5407
1.11.0	11/28 /2018	Changed the RelatedURL enumerations (Type and Subtype) so that they match the GCMD 8.6 version of the keywords that was released March 15 2018.	ECSE-409
			CMR-511

1.10.0	05/02		
	/2018	<ul> <li>Changed UseConstraints to be an object that includes Description, LicenseURL, and LicenseText elements instead of holding a description string.         <ul> <li>ISO mappings were identified for the new Use Constraints elements (ISO MENDS, ISO SMAP and ISO 19115-1)</li> </ul> </li> <li>Replaced VerticalSystemDefinitionType with AltitudeSystemDefinitionType and DepthSystemDefinitionType.</li> <li>Changed free text strings to enumerations for the following elements within AltitudeSystemDefinitionType and DepthSystemDefinitionType and DepthSystemDefinitionType and DepthSystemDefinitionType and DepthSystemDefinitionType and DepthSystemDefinitionType</li> <li>GeographicCoordinateSystemType now has GeographicCoordinateUnits that is enumerated.</li> <li>CollectionProgress is now enumerated.</li> <li>Added the sub elements and the ability to explain that DOI's are not included on purpose. (MissingReason, Explanation)</li> <li>Added MimeType sub element to Get Data for RelatedURLs</li> <li>Added MimeType sub element to Get Service for RelatedURLs</li> <li>Added MimeType sub element to OnlineResource and removed the required requirement for Name and Description so that only Linkage (a URL) is required.</li> <li>Enumerated AdditionalAttributes DataType sub element</li> <li>Removed TemporalRangeType sub element from TemporalExtentType</li> </ul>	CMR-4721
			ECSE-161
			ECSE-172
			ECSE-231
			ECSE-232
			ECSE-233
			ECSE-234
			CMR-3691
		<ul> <li>Enumerated VerticalSpatialDomainType</li> <li>Enumerated TilingIdentificationSystemName</li> </ul>	CMR-3675
			CMR-3367
			CMR-3366
			CMR-3365
1.9	3/21 /2017	<ul> <li>Changed OnlineResource ApplicationProtocol to ApplicationProfile</li> <li>Removed CenterPoint from Lines, GPolygons, and BoundingRectangles.</li> <li>Moved DOI from CollectionCitation to a top level element</li> </ul>	CMR-4464
	72017		CMR-3814
		Added OnlineResourceType     In PublicationReferenceType and ResourceCitationType, changed RelatedUrl to OnlineResource	CMR-3684
		Changed SensorType to InstrumentChildType and added ComposedOf relationship to instruments Added minitems to TilingIdenfiticationSystems in UMM-C so that the UMM tests work better	CMR-3678
		Changes to RelatedUrlType	
		Removed Title     Each RelatedUrl only contains one URL now, as opposed to an array of URLs	
		<ul> <li>Replaced Relation with URLContentType, Type, and Subtype enumerations. URLContentType and Type are required.</li> <li>Removed FileSize and MimeType.</li> </ul>	
		Added GetService and GetData.     Removed RelatedUrls from the required list.	
		<ul> <li>Added GetServiceType, GetDataType, and GetDataTypeFormatEnum.</li> <li>Updated URLMimeTypeEnum to include Not provided.</li> </ul>	
1.8	10/31		
	/2016	<ul> <li>Added VersionDescription to collection</li> <li>Made CollectionProgress required</li> </ul>	
4.7	0/07	Observed 1907 reis Outcome has four strictly 1907 reis Outcome Four	
1.7	9/27 /2016	Changed ISOTopicCategory type from string to ISOTopicCategoryEnum.	
1.6	8/1 /2016	Changed ContactInformation to be a single instance instead of an array. This change affects the ContactInformations in DataCenter, ContactPerson, and ContactGroup.	
1.5	7/28 /2016	Changed AdditionalAttribute Description to be required	
1.4		Changed Organization to DataCenter	
1.3	5/12 /2016	Changed singular PaleoTemporalCoverage to plural PaleoTemporalCoverages	
1.2	5/10		
	/2016	<ul> <li>SpatialKeywords is now deprecated, LocationKeywords will take its place.</li> <li>ISOTopicCategories is now an uncontrolled vocabulary.</li> <li>TilingCoordinateType's minimum value is not required.</li> </ul>	
1.1	2/10 /2016	Changed singular TilingIdentificationSystem to plural TilingIdentificationSystems	
1.0	2015	Initial Release	