Data Dictionary

Superclass	Class	Subclass	Sub-Subclass	Property	Definition	Value(s) / Format(s)	Links to	Notes
DAMS Thing				ID **(anyURI, required)**	Parent of all DAMS classes.		DAMS Event (event 0-m)	In the linked-data context, ID will be the subject URI.
	Repository			ID **(required)**	The identification of a library unit (or non-library data provider) that is responsible for supplying content to the DAMS and for administering that content over time, including answering queries from users. All objects in the DAMS must be linked to one and only one repository.		Object (hasObject 0-m) DAMS Event (event 1-m)	Mandatory event: repository record creation. Will revisit the need for Agency Code and Country Code properties. These attributes may be conducive for sharing records.
				repository Name **(string, required)**	The name of the repository or organizational unit assuming custodial responsibility for DAMS content.			
				repository URI **(anyURI, required)**	The URI linking to a webpage for the repository that contains contact and access information about the repository.			
	DAMS Resource			ID	Parent of DAMS classes with common descriptive metadata attached (Collection, Object, and Component)		Title (title 0-m) Date (date 0-m) Language (language 0-m) Note (note 0-m) Relationship (relationship 0-m) Complex Subject (subject 0-m)	Mandatory event: DAMS Resource creation (collection, object, component).

						Related Resource (relatedResource, 0-m) DAMS Event (event 1-m)	
		Collection		ID **(required)**	An aggregate of objects and/or collections. One type of collection is that in which all members of the collection have the same provenance. A second type of collection is a sub-part of the first type but having a title that distinguishes it from the parent collection. A third type of collection is a collection assembled by authorized library agents. This collection may be composed on other collections and/or discrete objects. Provenance is not a binder for the collection, as the assembled collection is typically constructed around a topical facet, e.g. Archive for New Poetry, Southworth Spanish Civil War, Melanesian, University Archives, etc.		Collection (relatedCollection 0-m) Object (hasObject 0-m) Title (title 1-m) Date (date 0-m) Language (language 1-m) Note (note 0-m) , ScopeContentNote (1-m) Relationship (relationship 0-m) Subject (subject 0-m) Related Resource (relatedResource 0-m) DAMS Event (event 1-m)	Mandatory event: collection record creation. Collection relationships need to be defined by policy TBD. relatedCollection -> peer collection hasCollection -> child collection collection -> parent collection Title and Language: cardinality overrides superclass. Note: only required note is ScopeContentNote additional requirements TBD
			Assembled Collection	ID **(required)**	Collection of materials composed of other collections and objects, often based around a common topic.		Collection (hasCollection 0-m) ProvenanceCollection (hasProvenanceCollection 0-m) Collection (relatedCollection 0-m)	

							Object (hasObject 0-m)	
							Title (title 1-m)	
							Date (date 0-m)	
							Language (language 1-m)	
							Note (note 0-m) , ScopeContentNote (1-m)	
							Relationship (relationship 0-m)	
							Subject (subject 0-m)	
							Related Resource (relatedResource 0-m)	
							DAMS Event (event 1-m)	
			Provenance Collection	ID **(required)**	Collection of materials that share a common provenance.		ProvenanceCollectionPart (hasPart 0-m)	
							Collection (relatedCollection 0-m)	
							Object (hasObject 0-m)	
							Title (title 1-m)	
							Date (date 0-m)	
							Language (language 1-m)	
							Note (note 0-m) , ScopeContentNote (1-m)	
							Relationship (relationship 0-m)	
							Subject (subject 0-m)	
							Related Resource	

				ID	Description		Relationships	Notes
							(relatedResource 0-m) DAMS Event (event 1-m)	
			Provenance Collection Part	ID **(required)**	Subpart of a Provenance Collection		ProvenanceCollection (provenanceCollection 1) Collection (relatedCollection 0-m) Object (hasObject 0-m) Title (title 1-m) Date (date 0-m) Language (language 1-m) Note (note 0-m) , ScopeContentNote (1-m) Relationship (relationship 0-m) Subject (subject 0-m) Related Resource (relatedResource 0-m) DAMS Event (event 1-m)	
		Object		ID **(required)**	A representation of an intellectual entity, sometimes referred to as a "work." The object is composed of three distinct types of information: 1) one or more content files, 2) one or more metadata records, and 3) a binder (unique ID) holding all the parts of the object together and maintaining the correct internal associations among the parts.		Repository (repository 1) Collection (collection 0-m) Component (hasComponent 0-m) File (hasFile 0-m) Title (title 1-m) Date (date 0-m) Language (language 1-m)	Every object must be linked to one, and only one, Repository. It may be linked to as many collections as are pertinent. DAMS Object requirements need to be changed to reflect this (RCI Levy & SIO examples) Mandatory event: object creation. Title and Language: cardinality overrides superclass.

								Note (note 0-m)	
								Relationship (relationship 0-m)	
								Subject (subject 0-m)	
								Copyright (copyright 1)	
								Statute (statute, 0-1)	
								License (license, 0-1)	
								Other Rights (otherRights, 0-1)	
								Name (rightsHolder 0-m)	
								Related Resource (relatedResource 0-m)	
								DAMS Event (event 1-m)	
					typeOfResource **(required)**	Basic character of the work.	C.V (mods): text, cartographic, notated music, sound recording-musical, sound recording-nonmusical,sound recording, still image, moving image, three dimensional object, software, multimedia, mixed material		Controlled vocabulary should be considered for extension and/or modification.
			Component		ID **(required)**	A logical or physical part of an object and contained exclusively within the object. The component may consist of metadata and one or more content files bound together within the context of the object. A component that has no directly associated content files is a logical component, whereas a component that has associated content files is a physical component.		Object (object 1) Component (component 0-1, hasComponent 0-m) File (hasFile 0-m) Title (title 0-m) Date (date 0-m) Language (language 0-m)	Components are bounded by, unique to an object context and only link to other objects having the same object context. Must link to the object the component is associated with. If the child of another component, must also link to it. Must have at least one child component or file. Must link to parent component if there is one.

							Description	Controlled Vocabulary	Relationships	Notes
							There is no constraint on how many components may occur at any given level or how deep the component hierarchy may go.		Note (note 0-m) Relationship (relationship 0-m) Subject (subject 0-m) Copyright (copyright, 0-1) Statute (statute, 0-1) License (license, 0-1) Other Rights (otherRights, 0-1) Name (rightsHolder 0-m) Related Resource (relatedResource, 0-m) DAMS Event (event 1-m)	Mandatory event: component record creation.
						order **(positiveInteger, required)**	Order between sibling components.			
						label **(string, required)**	Label describing the component; can be a literal or an ark referencing a title or date.			
						typeOfResource	Basic character of the work.	C.V (mods): text, cartographic, notated music, sound recording-musical, sound recording-nonmusical,sound recording, still image, moving image, three dimensional object, software, multimedia, mixed material		
	File					ID **(required)**	A file containing content capable of being rendered by a computer. May be of any mime type. The DAMS includes a description of each master file, that supports its preservation management.		Object (object 1) Component (component 0-1) SourceCapture (sourceCapture 0-1)	Ontology: METS Mandatory event: file ingest. Must link to the object the file is associated with. If associated with a component, must also link to it.

									Other Rights (otherRights 0-1)	Mandatory checksum: initial ingest checksum. Currently have best coverage in crc32, switch to sha256?
									DAMS Event (event 1-m)	
				use **(string, required)**	Type of file and role to object.	**File Use CV:** visual-source, visual-service, visual-thumbnail, visual-alternate, document-source, document-service, document-alternate, audio-source, audio-service, audio-alternate, data-source, data-service, data-alternate (see ¿File Use Vocabulary)			
				preservation Level **(string)**	Level of preservation of the file.	**Preservation Level CV:** bit-level, full, 0, 1, 2, fully supported with future migrations			Necessary?
				object Category **(string)**	Whether the entity is a bitstream, file or object.	**Object Category CV:** file			Necessary?
				composition Level **(nonNegative Integer)**	Decoding/unbundling steps required to extract file.	0, 1, 2, etc. (non-negative integer)			Necessary?
				size **(nonNegative Integer, required)**	Size of the file in bytes.				
				mime Type **(string)**		record MIME type			
				format Name **(string)**	Name of the file format.				
				format Version **(string)**	Version of the format in formatName.	6.0, 2003, etc.			
				source Filename **(string, required)**	Original source filename				
				source Path **(string, required)**	Original source file path.				
				date Created **(dateTimeStamp)**	Date and time the file was created.	**Date Encoding CV:** ISO8601			
				CRC32 Checksum **(hexBinary)**	Checksum calculated using the CRC32 algorithm.				
				MD5 Checksum **(hexBinary)**	Checksum calculated using the MD5 algorithm.				
				SHA1 Checksum **(hexBinary)**	Checksum calculated using the SHA-1 algorithm.				

					SHA256 Checksum **(hexBinary)**	Checksum calculated using the SHA-256 algorithm.			
					SHA512 Checksum **(hexBinary)**	Checksum calculated using the SHA-512 algorithm.			
	Relationship				ID **(required)**	Name/Role bundle which is linked to from Collection, Object, etc.		DAMS Event (event 0-m) Name (name 1) Role (role 1-m)	
	Title				ID **(required)**	A term or phrase describing a collection, object, or object component. The title may be transcribed from the work, from previous metadata, or supplied.		DAMS Event (event 0-m) Language (language 0-1) Title (relatedTitle 0-m)	relatedTitle should be used to link to equivalent transliterated, translated, abbreviated, etc. titles.
					value **(string, required)**				Renamed from title to avoid conflict with DAMSResource link to Title.
					subtitle **(string)**				
					part Number **(string)**				
					part Name **(string)**	Volume, issue #, etc.			
					nonsort Characters **(string)**	Initial characters which should not affect sort order.			Included to facilitate generating sort form without having to build complex algorithm to handle multiple languages.
					type **(string)**		**Title Type CV:** translated, transliterated, enumerated, abbreviated, uniform, main, alternative		untyped title is the main title
					authority **(string)**				if there is an authority, but no valueURI
					authorityURI **(anyURI)**				
					valueURI **(anyURI)**				may be replaced by owl:sameAs, can be multiple
					script **(string)**		ISO 15924 standard list?		
					displayLabel **(string)**	display text. e.g. source of title			
	Date				ID **(required)**	The date(s) for the collection, object, or object component. May be a single date or a		DAMS Event (event 0-m)	

					combination of inclusive dates and/or bulk dates. May indicate if it is the date for creation, issuance, capture, copyright, or otherwise.		
				type **(string)**		**Date Type CV:** broadcast captured copyright creation creation-date creation-date-earliest creation-date-latest creation-date-date qualifer deaccession issued modified published other (other type = ?) valid		How do we differentiate between inclusive and bulk dates? It should be possible to express both. VRA has additional type values. may need sameAs relationships to cover overlaps. The VRA date may be capable of being managed via our MODS encoding, in that a questionable set of dates for earliest and latest dates can be recorded in the date expression, while the questionable earliest and latest dates can be encoded as begin and end dates. We need to include a property qualifier (types = approximate, inferred, questionable). We also may need a date for key date, which is typically the normalized version of the start date (so it may not be necessary).
				value **(string)**	For example "Easter"		
				begin Date **(date)**			
				end Date **(date)**			
				encoding **(string)**		**Date Encoding CV:** ISO8601		could be implemented as typed literal or separate property.
	Note			ID **(required)**	A description of some facet of a collection, object, or object component. Facets may range form abstract and scope content notes to specific aspects such as		DAMS Event (event 0-m)	mods:originInfo will be created as an unstructured Note.

| | | | type (string) | | Note Type CV: | | Use type as display label when a displayLabel value is not provided by a data creator. Otherwise, display the type value as displayLabel to end user. |

Note Type CV:

1. abstract
2. appraisal
3. arrangement
4. biography/history
5. citation
6. computer / data type
7. conditions governing access
8. conditions governing use
9. creation/production credits
10. custodial history
11. dimensions
12. dissertation
13. existence and location of copies
14. existence and location of originals
15. funding information
16. general note
17. general physical description
18. geographic coverage
19. immediate source of acquisition
20. identifier
21. inscription
22. language of materials
23. location
24. material specific details
25. methodology note
26. numbering peculiarities
27. physical characteristics and technical requirements
28. participant/performer
29. physical facet
30. preferred citation
31. publication
32. related materials
33. scope and content
34. separated materials

Use type as display label when a displayLabel value is not provided by a data creator. Otherwise, display the type value as displayLabel to end user.

Augment type list for: VRA, EAD, MODS

Note types with analogs:

EAD
Local
MARC
MODS
VRA
*=unlikely to be used in domain

1. abstract (520)
2. *accruals (584, accrual method, accrual policy)
3. appraisal
4. arrangement (351)
5. *audience target (521)
6. *awards note (586)
7. *bibliography (504, 581, publications)
8. *binding information (563)
9. biography/history (545, biographical/historical)
10. *case file characteristics (565)
11. citation (510, textref, citation/reference)
12. computer / data type (516)
13. conditions governing access (506, restriction)
14. conditions governing use (540, 542, rights
15. *copy and version identification (562, version)
16. creation/production credits (508, creation/production credits)
17. custodial history (561,

	ship)						ownership) 18. data quality (514) 19. *date / time for event (518, venue) 20. dimensions (measurements 21. dissertation (502, thesis) 22. *documentation information (556) 23. *entity and attribute information (552) 24. *exhibitions note (585, exhibitions) 25. existence and location of copies (530 535, location, additional physical form) 26. existence and location of originals (534, 535, location, original location, original version) 27. *file plan 28. *former title complexity (547) 29. funding information (536, funding) 30. general note (500) 31. general physical description 32. geographic coverage (522) 33. immediate source of acquisition (541, source, acquisition) 34. identifier 35. *issuing body (550) 36. language of materials (546, language) 37. *legal status 38. *linking entry complexity (580) 39. location 40. material specific details 41. methodology note (567) 42. numbering peculiarities (515, numbering) 43. *other finding aids (555) 44. participant/performer (511, performers) 45. physical characteristics and technical requirements (538,

							300, 340, material, system details) 46. physical facet 47. preferred citation (524, preferred citation) 48. *processing information 49. publication 50. related materials (544) 51. *report type and date (513) 52. *reproduction note (533, reproduction) 53. scope and content (520, description) 54. separated materials 55. *study program information (526) 56. *supplement note (525) 57. *with note (501)
			displayLabel **(string)**	Free text qualifier of the note type.			
			internal Only **(boolean, required)**	If true, accessible to all users or only to repository and DAMS managers.	yes,no (default)		no = public, yes = custodial repository
			value **(string)**				
		Scope Content Note	**(inherit all properties)**				
		Preferred Citation Note	**(inherit all properties)**				investigate automating this value/property
		Custodial Responsibility Note	**(inherit all properties)**				should be populated by Repository for an Object.
	Vocabulary		ID **(required)**	A named vocabulary list. Can be used to manage a list of terms for a text field.		DAMS Event (event 0-m)	
			description **(string, required)**	Vocabulary name/description.			Renamed from name to avoid conflict with DAMSResource link to Name.
	Vocabulary Entry		ID **(required)**	A term in a vocabulary list.		Vocabulary (vocabulary 1) DAMS Event (event 0-m)	
			code **(string)**	Code form of value (if available) e.g. en=English			

				value **(string, required)**	Typically the display value. The code could potentially be used as an alternative for display.			
				description **(string)**	Internal notes, scope, usage, etc.			
				authority **(string)**				
				authority URI **(anyURI)**				
				value URI **(anyURI)**				
		Language		**(inherit all properties)**	The language(s) of the collection, object, or object component.	term: ISO639-2	DAMS Event (event 0-m)	
		Role		**(inherit all properties)**	A term describing the relationship between a Name and an Collection, Object, Component, Events, and Rights Status.	**Role CV:** Terms are taken from the list MARC Relators Terms/Codes	DAMS Event (event 0-m)	A list of terms for the relationship of name to Collection, Object, Component, Events, and Rights Status. The predicates can be derived from standard and local list of role terms. Role may be a subclass of higher level entity such as Functional Relationship
	Cartographics			ID **(required)**	Information about geographic location (coordinates) or about a representation of geographic information (i.e. map, chart, model) for a collection, object, or object component.		DAMS Event (event 0-m)	
				scale **(string)**	The relative size of the representation or rendering of geographic information (i.e. map, chart, model) to the actual location.			
				projection **(string)**	The method of representing the surface of a sphere or other three-dimensional body on a plane.	Map Projections		
				reference System **(string)**	The standard coordinate frame for the coordinates being used.	**Reference System CV:** WGS84, WGS72, WGS66...		
				point **(string)**	Coordinates for a single point.	Decimal degree format		Need content standard for data being entered (delimiters between lat, long and

							alt and between coordinate sets).
				line **(string)**	Coordinates for a line.	Decimal degree format			Need content standard for data being entered (delimiters between lat, long and alt and between coordinate sets).
				polygon **(string)**	Coordinates for a polygon.	Decimal degree format		Need content standard for data being entered (delimiters between lat, long and alt and between coordinate sets).
	Related Resource			ID **(required)**	Describes a related resource either internal to the DAMS or in a system external to the DAMS. This could include metadata in another format, content version in another system, relationship between objects and relationship between collections in respect to a specified property.		DAMS Event (event 0-m)	We may need to either write policy to enforce relationships between classes (object to object, collection to collection, etc.) or subclass Related Resource to enforce relationships.
				uri **(anyURI)**	URI where the related record can be accessed.			
				type **(string)**	Type of relationship.	**Related Resource CV:** online exhibit, source, parallel description, depicts, derived from		VRA relationship value list? Types TBD.
				description **(string)**	Title of the related resource.			Renamed from title to avoid conflict with DAMSResource link to Title.
	Source Capture			ID **(required)**	An indication of software and hardware used to produce the content file.		DAMS Event (event 0-m)	Ontology: MIX
				source Type **(string)**	the medium of the analog source material scanned to create a digital still image			
				image Producer **(string)**	organization that created the file			
				capture Source **(string)**	type of device used to create the file			
				scanner Manufacturer **(string)**	scanner manufacturer name			
				scanner Model Name **(string)**	scanner model name			
				scanning Software	scanning software name			

				(string)			
				scanning Software Version **(string)**	scanning software version number		
	Rights			ID **(required)**		DAMS Event (event 0-m)	
		Copyright		ID **(required)**	The copyright status of an object or object component, indicating if the object or object component is under copyright, if it is in the public domain, or if copyright is unknown.	Dates (date 0-1) DAMS Event (event 0-m)	
				copyright Status **(string, required)**	An value indicating the copyright status for an object	**Copyright Status CV:** Under copyright -- 1st Party Under copyright -- 3rd Party Public domain Copyright unknown		In context of UCSD, "Under copyright -- 1st Party" refers always and only to "UC Regents" as the rights holder, whereas "Under copyright -- 3rd party" refers to copyright held by any agent other than the UC Regents. Modeling the copyright status in this manner allows the system to be configured differently for a different domain.
				copyright Jurisdiction **(string, required)**	An indication of the legal jurisdiction (typically national) in with the copyright status statement is true.	**Copyright Jurisdiction CV:** Use ISO 3166-1 for country codes		
				copyright Purpose Note **(string)**	boilerplate text stating the content is made available for educational purposes.			
				copyright Note **(string)**	boilerplate copyright note referencing copyright status and jurisdiction.	**Copyright Note CV:** See TPOT		estimate that there will be 6 of these Note objects.
		Statute		ID **(required)**	A national or regional statute that pertains to content and typically limits access to it on some degree, e.g. Federal Educational Rights and Privacy Act (FERPA), which limits dissemination of student records for a specified period of time.		Rights Action (rightsAction 1-m) DAMS Event (event 0-m)	Statutes typically limit access to content in some way, often because the content is of a type protected by privacy / confidentiality laws, e.g. FERPA, HIPA, etc. Currently we do not include in the DAMS any content subject to statutory regulation. That, of course, can change.

							CV		Links	Notes
										Statues link to a permissions and / or restriction records, and they link to dates. Thus, statutes link indirectly to dates. Required Rights Action: whether the statute allows or prohibits display.
					statute Citation **(string, required)**	The name of the statute, e.g., Family Education Rights and Privacy Act (FERPA)				
					statute Jurisdiction **(string, required)**	The country or regional jurisdiction in which the statute applies	**Statute Jurisdiction CV:** Use ISO 3166-1 for country codes Use ISO 3166-2 for state codes			
					statute Note **(string)**	Can be used to provide a summary statement of a statute and obligation to it, e.g., students records must be restricted for 50 years after creation or death (or whatever the actual terms are now)				
		License			ID **(required)**	A contract between the rights holder for content and the repository indicating the rights and constraints placed upon the content for the repository. Purchase agreements, deeds of gift, transfer agreements are construable as kinds of licenses.			Rights Action (rightsAction 1-m) DAMS Event (event 0-m)	It is possible for a license to be granted at specific time but for some or all eventual permissions to be restricted for a period of time initially. This is basically how embargoed ETDs are now modeled in the DAMS. Licenses statements must link to permission and/or restrictions statements, and those statements link to dates. Thus, license statements do not directly link to dates. The active dates of the license should be capable of being inferred from the whole of the related permission / restriction statements, if there is cause to assign a collective date to a license.
					license Note **(string)**	Can be used to provide a summary of a license and its terms, either in place of a license or as an abstract on a license linked to.				

				license URI **(anyURI)**				
		Other Rights		ID **(required)**	Any other rights not covered by copyright, statute, or license. This typically includes library policies that restrict access to content out of respect to cultural sensitivities.		Relationship (relationship 1) Rights Action (rightsAction 1-m) DAMS Event (event 0-m)	We currently do not use Other Rights in the DAMS, but that is because this element was only recently added to PREMIS. We do have objects that have been restricted due to institutional policy, the culturally sensitive objects in Lambert being a case in point. We also have objects that UCSD has decided to display under the principles of fair use. Other Rights, like other right types, link indirectly to dates via Rights Action. Required Relationship: decision maker.
				other Rights Basis **(string, required)**	For indicating the type or source of the other rights, e.g., UC San Diego Policy, UC Policy, etc.	**Other Rights Basis CV:** fair use, cultural sensitivity		We might want to construct a controlled vocabulary for this. There are likely only a few institutional policies / situations that apply
				other Rights Note **(string)**	Notes can be linked to provide summaries of institution policies.			
				other Rights URI **(anyURI)**	An actionable link to the documentation containing the institutional policy or other rights being applied			
	Rights Action			ID **(required)**	An action that is permitted or restricted according to the rights status for an object or object component.		DAMS Event (event 0-m)	
				begin Date **(date)**				same beginDate property from Date class
				end Date **(date)**				same endDate property from Date class
				type **(string, required)**		**Rights Action CV:** display, migrate, replicate, modify,...		
		Permission		**(inherit all properties)**			DAMS Event (event 0-m)	
		Restriction		**(inherit all properties)**		endDate required	DAMS Event (event 0-m)	
DAMS Event				ID **(required)**	Any event occurring in the DAMS slated to being		Relationship (relationship 1-m)	Ontology: PREMIS

							tracked. Such events can include uploading of content files, creation and updating of metadata records, deletion of objects, and transfer of objects and collections to preservation management.		Required name/role: event initiator.
						type **(string required)**	Type of event.	**Event Type CV:** See UCSD DAMS Events Vocabulary (will need revision to reflect Data Model)	
						end Date **(dateTimeStamp, required)**	Timestamp when the event occurred.	ISO8601	same endDate property from Date class
						detail **(string, required)**	Description of the event, containing any relevant details.		
						outcome **(string, required)**	Whether the event succeeded or failed.	Action succeeded	
						outcome Note **(string)**	Extended information about the event, including any relevant status message and timestamp.		
MADS Extensions									Outline and extensions shown. See the MADS Primer for the full MADS ontology.
Element									
	Built Work Place Element								VRA Core 4
	Cultural Context Element								VRA Core 4
	Function Element								
	Iconography Element								VRA Core 4
	Scientific Name Element								

	Style Period Element							VRA Core 4
	Technique Element							VRA Core 4
MADSType					See MADS RDF documentation.			
	Complex Type							
		Complex Subject					DAMS Event (event 0-m)	
	Simple Type							
		Built Work Place			Describes a built environment, site, or other constructed place.			VRA Core 4
		Cultural Context			The name of the culture, people (ethonym), or adjectival form of a country name from which a resource originated, or has been associated with.			VRA Core 4
		Function						
		Iconongraphy			The people and items depicted, the composition of an image, etc.			VRA Core 4
		Name					DAMS Event (event 0-m)	
		Scientific Name						
		Style Period			A defined style, historical period, group, school, dynasty, movement, etc. whose characteristics are represented in the resource.			VRA Core 4
		Technique			The production or manufacturing processes, techniques, and methods incorporated in the fabrication or alteration of the resource.			VRA Core 4