## **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.			In the linked-data context, ID will be the subject URI.
	Repository				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.		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.
					All objects in the DAMS must be linked to one and only one repository.			
				(string, required)	The name of the repository or organizational unit assuming custodial responsibility for DAMS content.			
				(anyURI, required)	The URI linking to a webpage for the repository that contains contact and access information about the repository.			
	DAMS Resource				Parent of DAMS classes with common descriptive metadata attached (Collection, Object, and		Date (date 0-m)	Mandatory event: DAMS Resource creation (collection, object, component).
					Component)		Language (language 0-m)  Note (note 0-m)	
							Relationship (relationship 0-m)	
							Complex Subject (subject 0-m)	

			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	Collection (relatedCollection 0-m)  Object (hasObject 0-m)  Title (title 1-m)  Date (date 0-m)  Language (language 1-m)  Note (note 0-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
		for New Poetry, Southworth Spanish Civil War, Melanesian, University Archives, etc.		
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)
			Date (date 0-III)
			Language (language 1-m)
			Note (note 0 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 ID (required)	Collection of materials that	ProvenanceCollectionPart
	Collection	share a common	(hasPart 0-m)
		provenance.	Collection
			(relatedCollection 0-m)
			Object (hasObject 0-m)
			Title (title 1-m)
			Date (date 0-m)
			Language (language 1-m)
			Language (ranguage 1 m)
			Note (note 0-m),
			ScopeContentNote (1-m)
			Relationship (relationship
			0-m)
			Subject (subject 0-m)
i I			

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

					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 <b>(required)</b>	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.

		r e	There is no constraint on how many components may occur at any given level or how deep the component hierarchy may go.			Mandatory event: component record creation.
			Order between sibling components.			
		quired)	Label describing the component; can be a literal or an ark referencing a title or date.			
	type	eOfResource E		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 (	c e r i r	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.		Component (component 0-1) SourceCapture	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.

 1		•	1	1
			0-1)	Mandatory checksum: initial ingest checksum. Currently have best coverage in crc32, switch to sha256?
use (string, required)		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)		
I <sup>-</sup>	file.	Preservation Level CV: bit-level, full, 0, 1, 2, fully supported with future migrations		Necessary?
	Whether the entity is a bitstream, file or object.	Object Category CV:		Necessary?
(nonNegative Integer)	required to extract file.	0, 1, 2, etc. (non-negative integer)		Necessary?
size (nonNegative Integer, required)	Size of the file in bytes.			
mime Type ( <b>string</b> )		record MIME type		
format Name (string)	Name of the file format.			
	Version of the format in formatName.	6.0, 2003, etc.		
date Created (dateTimeStamp)		Date Encoding CV: ISO8601		
	Checksum calculated using the CRC32 algorithm.			
	Checksum calculated using the MD5 algorithm.			
	Checksum calculated using the SHA-1 algorithm.			
Checksum (hexBinary)	Checksum calculated using the SHA-256 algorithm.			
SHA512	Checksum calculated using			

	Checksum (hexBinary)	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.		,	relatedTitle should be used to link to equivalent transliterated, translated, abbreviated, etc. titles.
	value <b>(string</b> ,				Renamed from title to avoid conflict with
	required)				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 combination of inclusive dates and/or bulk dates. May indicate if it is the date for creation, issuance, capture,		DAMS Event (event 0-m)	

		cc	opyright, or otherwise.			
	type	(string)		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	e (string) Fo	or example "Easter"			necessary).
		in Date (date)				
		Date (date)				
		oding (string)		Date Encoding CV: ISO8601		could be implemented as typed literal or separate property.
Note	ID (re	a cc ra sc sp	description of some facet of collection, object, or object omponent. Facets may ange form abstract and cope content notes to pecific aspects such as ghts status.		·	mods:originInfo will be created as an unstructured Note.
	type	(string)		Note Type CV:  1. abstract		Use type as display label when a displayLabel value is not provided by a data creator. Otherwise, display the type

2. appraisal	value as displayLabel to end user.
3. arrangement	,,
4. biography/history	Augment type list for: VRA, EAD, MODS
5. citation	3 71
6. computer / data type	Note types with analogs:
conditions governing access	, , , , , , , , , , , , , , , , , , ,
7. conditions governing use	EAD
8. creation/production credits	Local
9. custodial history	MARC
10. dimensions	MODS
11. dissertation	VRA
12. existence and location of	*=unlikely to be used in domain
copies	-animoly to be asea in admain
13. existence and location of	
originals	d shatteed (FOO)
14. funding information	1. abstract (520)
15. general note	2. *accruals (584, accrual method,
16. general physical description	accrual policy)
17. geographic coverage	3. appraisal
18. immediate source of	4. arrangement (351)
acquisition	5. *audience target (521)
19. identifier	6. *awards note (586)
20. inscription	7. *bibliography (504, 581,
· ·	publications)
21. language of materials 22. location	8. *binding information (563)
23. material specific details	9. biography/history (545,
· ·	biographical/historical)
24. methodology note	10. *case file characteristics (565)
25. numbering peculiarities	11. citation (510, textref,
26. physical characteristics and	citation/reference)
technical requirements	12. computer / data type (516)
27. participant/performer	13. conditions governing access
28. physical facet	(506, restriction)
29. preferred citation	14. conditions governing use (540,
30. publication	542, rights
31. related materials	15. *copy and version identification
32. scope and content	(562, version)
33. separated materials	16. creation/production credits (508
	creation/production credits)
	17. custodial history (561,
	ownership)
	18. data quality (514)
	19. *date / time for event (518,
	venue)

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				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)
1				45. physical characteristics and
				technical requirements (538,
				300, 340, material, system
				details)
				46. physical facet
				47. preferred citation (524, preferred
	1			17. prototted offation (024, protetted

						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)
			Free text qualifier of the note type.			
		internal Only (boolean,	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			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			A term in a vocabulary list.		Vocabulary (vocabulary 1)  DAMS Event (event 0-m)	
			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.			

descrip	ition Internal notes, scope, usage,			
(string	etc.			
	ty (string)			
authori (anyUF	RI)			
value U (anyUf				
Language (inheri proper	0 0 \ /	term: ISO639-2	DAMS Event (event 0-m)	
Role (inheri		Role CV: Terms are taken from the list MARC Relators Terms/Codes	, , ,	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 (req	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 (s	representation or rendering of geographic information (i.e. map, chart, model) to the actual location.	of		
project	ion (string) The method of representing the surface of a sphere or other three-dimensional body on a plane.	Map Projections		
referen (string	The standard coordinate frame for the coordinates being used.	Reference System CV: WGS84, WGS72, WGS66		
point (s	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 (st	ring) 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 <b>(anyURI)</b>	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 <b>(string)</b>	scanner model name			
	scanning Software (string)	scanning software name			
	scanning Software Version (string)	scanning software version number			
Rights	ID (required)			DAMS Event (event 0-m)	

Copyright		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 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
	Jurisdiction (string, required)		Copyright Jurisdiction CV: Use ISO 3166-1 for country codes		domain.
	purpose Note (string)	boilerplate text stating the content is made available for educational purposes.			
	copyright Note (string)		Copyright Note CV: See TPOT		estimate that there will be 6 of these Note objects.
Statute		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.		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.  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 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		Relationship (relationship 1)	We currently do not use Other Rights in the DAMS, but that is because this element was only recently added to

			includes library policies that restrict access to content out of respect to cultural sensitivities.		1-m)	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.
			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			Any event occurring in the DAMS slated to being tracked. Such events can include uploading of content files, creation and updating of metadata records, deletion of objects, and transfer of		Relationship (relationship 1-m)	Ontology: PREMIS Required name/role: event initiator.

			chicate and callections to		
			objects and collections to preservation management.		
			_	F	
			Type of event.	Event Type CV:	
		required)		See UCSD DAMS Events Vocabulary	
				(will need revision to reflect Data	
				Model)	
				ISO8601	same endDate property from Date class
		(dateTimeStamp,	occurred.		
		required)			
			Description of the event,		
		required)	containing any relevant		
			details.		
			Whether the event	Action succeeded	
			succeeded or failed.		
			Extended information about		
			the event, including any		
			relevant status message and		
			timestamp.		
MADS					Outline and extensions shown. See the
Extensions					MADS Primer for the full MADS ontology.
Element					
	Built Work				VRA Core 4
	Place				
	Element				
	Cultural				VRA Core 4
	Context				
	Element				
	Function				
	Element				
-	Iconography				VRA Core 4
	Element				
	Scientific				
	Name				
	Element				
	Style Period				VRA Core 4
	Element				
	Technique				VRA Core 4
	Element				11.1.1.0010 1
MADSType					
INIVDOLÀHE					

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