

# Data Models and Metadata Schemas

## CurateND Data Model

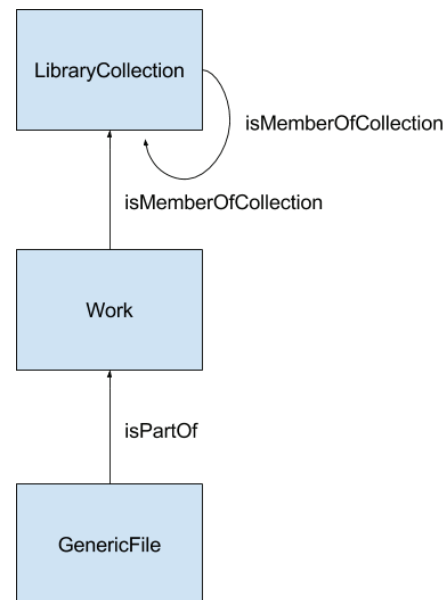
### Structural Relationships

CurateND uses an early version of the PCDM for structural relationships and a Dublin Core with extensions for the descriptive metadata. Objects have one of three types: *LibraryCollection*, *Work*, or *Generic File*. In practice, while there is a single type of *LibraryCollection* and *GenericFile*, there are many types of *Works*.

All the predicates are in the Fedora Commons 3 external relation namespace, i.e. `info:fedora/fedora-system:def/relations-external#`.

### Descriptive Metadata

The descriptive metadata is based on Dublin Core, but has freely added extensions when needed.



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Predicate	Display label	Content Type	Input description	Cardinality (Y=many, N=one)
<a href="http://purl.org/dc/terms/alternative">http://purl.org/dc/terms/alternative</a>	Alternative Title	String, title alternative form.	Already in input page but not displaying?	many
<a href="http://purl.org/dc/terms/contributor(unqualified)">http://purl.org/dc/terms/contributor(unqualified)</a>	Contributor	String, generally personal name. e.g. "Butler, Octavia"	This is also in the input page, but not displaying for books.	many
<a href="http://purl.org/dc/terms/contributor#artist">http://purl.org/dc/terms/contributor#artist</a>	Contributing Artist	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for creating artistic works within the resource, other than illustrations.	many
<a href="http://purl.org/dc/terms/contributor#author">http://purl.org/dc/terms/contributor#author</a>	Coauthor	String, generally personal name. e.g. "Butler, Octavia"	An authorial entity who contributed to the resource.	many
<a href="http://purl.org/dc/terms/contributor#editor">http://purl.org/dc/terms/contributor#editor</a>	Contributing Editor	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for editing the resource.	many
<a href="http://purl.org/dc/terms/contributor#illustrator">http://purl.org/dc/terms/contributor#illustrator</a>	Contributing Illustrator	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for illustrating the resource.	many
<a href="http://purl.org/dc/terms/contributor#photographer">http://purl.org/dc/terms/contributor#photographer</a>	Contributing Photographer	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for creating photographic works within the resource.	many
<a href="http://purl.org/dc/terms/creator">http://purl.org/dc/terms/creator</a>	Inventor	String, generally personal name. e.g. "Butler, Octavia"	An entity listed on the patent as a creator.	Y
<a href="http://purl.org/dc/terms/creator">http://purl.org/dc/terms/creator</a> (unqualified)	Creator	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for the resource's creation.	many

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<a href="http://purl.org/dc/terms/creator#administrative_unit">http://purl.org/dc/terms/creator#administrative_unit</a>	Department	String	Relevant academic departments	Y
<a href="http://purl.org/dc/terms/creator#artist">http://purl.org/dc/terms/creator#artist</a>	Artist	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for art works in a resource which consists primarily of art works (e.g. an art book).	many
<a href="http://purl.org/dc/terms/creator#author">http://purl.org/dc/terms/creator#author</a>	Author	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for significant authorial work within the resource.	many
<a href="http://purl.org/dc/terms/creator#editor">http://purl.org/dc/terms/creator#editor</a>	Editor	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for significant editorial work in creating the resource.	many
<a href="http://purl.org/dc/terms/creator#illustrator">http://purl.org/dc/terms/creator#illustrator</a>	Illustrator	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for illustrations of a resource which consists primarily of illustrations (e.g. a children's picture book).	many
<a href="http://purl.org/dc/terms/creator#local">http://purl.org/dc/terms/creator#local</a>	n/a	String, generally personal name. e.g. "Butler, Octavia"	Creators who are (or were) associated with the local institution. People are to be listed here in addition to being listed in dc:creator.	Y
<a href="http://purl.org/dc/terms/creator#photographer">http://purl.org/dc/terms/creator#photographer</a>	Photographer	String, generally personal name. e.g. "Butler, Octavia"	An entity responsible for photography in a resource which consists primarily of photographs, (e.g. a collection of a photographer's work).	many
<a href="http://purl.org/dc/terms/date#application">http://purl.org/dc/terms/date#application</a>	Application Date	String. (date?) Has form "YYYY-MM-DD"	The date of the initial submission of the application for this patent.	N
<a href="http://purl.org/dc/terms/date#prior_publication">http://purl.org/dc/terms/date#prior_publication</a>	Prior Publication Date	String. (date?) Has form "YYYY-MM-DD"	Date of prior publication (?)	N
<a href="http://purl.org/dc/terms/date#copyrighted">http://purl.org/dc/terms/date#copyrighted</a>	Copyright Date	Should be in form YYYY. More granular dates unlikely	The resource's copyright date	one
<a href="http://purl.org/dc/terms/date#submitted">http://purl.org/dc/terms/date#submitted</a>	Date Added	Date	Date object was created in CurateND	N

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<a href="http://purl.org/dc/terms/description">http://purl.org/dc/terms/description</a>	Description	String	Description of patent, may contain abstract.	Y
<a href="http://purl.org/dc/terms/description#table_of_contents">http://purl.org/dc/terms/description#table_of_contents</a>	Table of Contents	String. May be chapter titles separated by a space, two hyphens, and a space, e.g. " -- ". Does not need to be parsed specially, can simply be displayed as a string.	A listing of the chapters or sections of a resource as taken from the resource's contents listing.	one
<a href="http://purl.org/dc/terms/extent">http://purl.org/dc/terms/extent</a>	Extent	String. Will probably be page length, e.g. "368 pages"	The number of pages in the resource, the resource's size, or the resource's duration	many
<a href="http://purl.org/dc/terms/extent#claims">http://purl.org/dc/terms/extent#claims</a>	Claims	String.	The number of claims in this patent. Usually an integer, but has type string to handle any possible special cases.	N
<a href="http://purl.org/dc/terms/identifier#isbn">http://purl.org/dc/terms/identifier#isbn</a>	ISBN	Structured alphanumeric string (regex test: [0-9x]), either 10 or 13 characters. They often contain hyphens, but can be normalized to not.	The resource's ISBN.	many
<a href="http://purl.org/dc/terms/identifier#local">http://purl.org/dc/terms/identifier#local</a>	Local Identifier	String. For most digitized books, will be the call number, but may be another kind of local identifier used to shelve or handle books.	The resource's local identifier, e.g. call number.	many
<a href="http://purl.org/dc/terms/identifier#other_application">http://purl.org/dc/terms/identifier#other_application</a>	Other Application	String.	A prior submittal of this patent for review. (?)	Y
<a href="http://purl.org/dc/terms/identifier#patent">http://purl.org/dc/terms/identifier#patent</a>	Patent Number	String. May contain spaces. E.g. "US 1234567890123 B2"	The patent number for this resource. Probably refers to the USPTO but not restricted to US patents.	N

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<a href="http://purl.org/dc/terms/identifier#prior_publication">http://purl.org/dc/terms/identifier#prior_publication</a>	Prior Publication Number	String.	Identifier for the prior publication of this patent.	Y
<a href="http://purl.org/dc/terms/isPartOf">http://purl.org/dc/terms/isPartOf</a>	Published in	String (unfortunately)	The title of the journal, book, or other work in which the Article was published	N
<a href="http://purl.org/dc/terms/issued">http://purl.org/dc/terms/issued</a>	Publication Date	Should be in form YYYY. More granular dates unlikely	The resource's publication date	one
<a href="http://purl.org/dc/terms/issued">http://purl.org/dc/terms/issued</a>	Publication Date	Can we test as YYYY or YYYY-MM or YYYY-MM-DD	The article's publication date as year, year-month, or year-month-day, eg. 2015 or 2015-05 or 2015-05-31	N
<a href="http://purl.org/dc/terms/issued">http://purl.org/dc/terms/issued</a>	Date Issued	String. (See date discussion above)	Date the patent was issued.	N
<a href="http://purl.org/dc/terms/isVersionOf#edition">http://purl.org/dc/terms/isVersionOf#edition</a>	Edition	String. Will probably be a number and additional text: 2, 2nd edition, etc.	The resource's edition.	one
<a href="http://purl.org/dc/terms/language">http://purl.org/dc/terms/language</a>	Language	String		Y
<a href="http://purl.org/dc/terms/modified">http://purl.org/dc/terms/modified</a>	Date Modified	Date	Date object was last modified in CurateND	N
<a href="http://purl.org/dc/terms/publisher">http://purl.org/dc/terms/publisher</a>	Publisher	String		Y
<a href="http://purl.org/dc/terms/rights">http://purl.org/dc/terms/rights</a>	Rights	String	Intellectual Rights	Y
<a href="http://purl.org/dc/terms/rightsHolder">http://purl.org/dc/terms/rightsHolder</a>	Assignee	String	Assignee of the patent.	Y
<a href="http://purl.org/dc/terms/source">http://purl.org/dc/terms/source</a>	USPTO Link	URL.	Link to the patent at the USPTO website (or other patent office websites).	N
<a href="http://purl.org/dc/terms/subject#cpc">http://purl.org/dc/terms/subject#cpc</a>	Classification (CPC)	String.	Cooperative Patent Classification codes.	Y

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<a href="http://purl.org/dc/terms/subject#ipc">http://purl.org/dc/terms/subject#ipc</a>	Classification (IPC)	String.	International Patent Classification codes.	Y
<a href="http://purl.org/dc/terms/subject#lcsb">http://purl.org/dc/terms/subject#lcsb</a>	Subject (Library of Congress)	String. Taken from the book's bib record. E.g. "Amnesia -- Fiction."	A topic of the content of the resource as taken from the Library of Congress Subject Headings.	many
<a href="http://purl.org/dc/terms/subject#uspc">http://purl.org/dc/terms/subject#uspc</a>	Classification (US Patent)	String.	US Patent Classification codes.	Y
<a href="http://purl.org/dc/terms/title">http://purl.org/dc/terms/title</a>	Title	String	Title of the Patent	N
<a href="http://purl.org/dc/terms/type">http://purl.org/dc/terms/type</a>	n/a	String	The subtype of Work this item is.	N
<a href="http://purl.org/ontology/bibo/eissn">http://purl.org/ontology/bibo/eissn</a>	e-ISSN	e-ISSN validation?	The e-ISSN of the publication in which the article appears	N
<a href="http://purl.org/ontology/bibo/isbn">http://purl.org/ontology/bibo/isbn</a>	ISBN	ISBN validation from Book Type?	If the article is published in a volume with an ISBN, the volume's ISBN	N
<a href="http://purl.org/ontology/bibo/issn">http://purl.org/ontology/bibo/issn</a>	ISSN	ISSN validation?	The ISSN of the publication in which the article appears	N
<a href="http://purl.org/ontology/bibo/issue">http://purl.org/ontology/bibo/issue</a>	Issue	String	The number(s) or name of the issue in which the article appears.	N
<a href="http://purl.org/ontology/bibo/numPages">http://purl.org/ontology/bibo/numPages</a>	Number of pages	Integer	The total number of pages as an integer	N
<a href="http://purl.org/ontology/bibo/pageEnd">http://purl.org/ontology/bibo/pageEnd</a>	Last page	String	The number or other identifier of the article's final page.	N
<a href="http://purl.org/ontology/bibo/pageStart">http://purl.org/ontology/bibo/pageStart</a>	First page	String	The number or other identifier of the first page on which the article appears, e.g. "42" or "E594"	N
<a href="http://purl.org/ontology/bibo/volume">http://purl.org/ontology/bibo/volume</a>	Volume	String	The number or name of the volume in which the article appears.	N



## QUICK START GUIDE: SIMPLE CREATE

Using EZID's UI, you can quickly and easily create ARKs and DOIs. If you do not know any of the values for the properties outlined below, see the Quick Start Guide "What to do if required information is unavailable."

### FOR ARKS

Property	Description	Examples
<b>Object location URL</b>	The current location (URL) of the identified object.	<a href="http://merritt.cdlib.org/m/ark%3A%2F13030%2Fqt5np807ch">http://merritt.cdlib.org/m/ark%3A%2F13030%2Fqt5np807ch</a>  <a href="http://opencontext.org/subjects/199ED3F0-8CA2-4BBD-FA14-468133255587">http://opencontext.org/subjects/199ED3F0-8CA2-4BBD-FA14-468133255587</a>  <a href="http://www.coredu.fr/repository/OAIHandler?verb=GetRecord&amp;metadataPrefix=lom&amp;identifier=oai:editors.coredu.fr:31779">http://www.coredu.fr/repository/OAIHandler?verb=GetRecord&amp;metadataPrefix=lom&amp;identifier=oai:editors.coredu.fr:31779</a>
<b>Who</b>	<p>The name of an entity (person, organization, or service) responsible for creating the content or making it available, e.g. author, creator.</p> <p>Put name parts in "sort-friendly" order. Separate multiple names with ",". Append one or more final commas (",") to indicate that one or more internal commas can be used as inversion points to recover natural word order (if different from sort-friendly word order).</p>	<p>Kim, JH,; Cho, J,; Keane, TD,</p> <p>Virginia Department of Historic Resources (VA-DHR); Open Context Editors</p> <p>Canal Educatif à la Demande</p>
<b>What</b>	A name or other human-oriented identifier given to the resource, e.g. a title.	<p>Political fragmentation and land use changes in the Interior Plains</p> <p>Virginia Site Files: 44WR0079 (Site)</p> <p>Vidéos Sciences &amp; Innovation de Canal Éducatif à la Demande</p>
<b>When</b>	A point or period of time (date range) important in the lifecycle of the resource, often when it was created, modified, or made available. Use ";" to separate entries and "~" to indicate approximation.	<p>10/4/2015</p> <p>2014-07-31T00:00:00-07:00</p> <p>1/1/2007</p>



FOR DOIs

Property	Description	Examples
<b>Object location URL</b>	The current location (URL) of the identified object.	<a href="https://lilliput.figshare.com/articles/Impact_of_Task_Performance_Fraud_Risk_Assessment_on_Forensic_Skills_and_Mindsets_Experience_from_Nigeria/2002749">https://lilliput.figshare.com/articles/Impact_of_Task_Performance_Fraud_Risk_Assessment_on_Forensic_Skills_and_Mindsets_Experience_from_Nigeria/2002749</a>  <a href="http://doi.virtualbrain.org/lp/10.5072/FK2028TW8Z">http://doi.virtualbrain.org/lp/10.5072/FK2028TW8Z</a>  <a href="http://mdsoarstage.lib.umd.edu/handle/11603-STAGE/4859">http://mdsoarstage.lib.umd.edu/handle/11603-STAGE/4859</a>
<b>Creator</b>	The main researchers involved in producing the data, or the authors of the publication in priority order. May be a corporate, institutional, or personal name. In personal names, list family name before given name.	George, Christopher  Worth, A [MGH]  Owens, Allessia P.
<b>Title</b>	A name or title by which the data or publication is known.	Impact of Task Performance Fraud Risk Assessment on Forensic Skills and Mindsets: Experience from Nigeria  Internet Brain Segmentation Repository  Mentoring African American males
<b>Publisher</b>	A holder of the data (e.g., an archive) or the institution which submitted the work. In the case of datasets, the publisher is the entity primarily responsible for making the data available to the research community.	Figshare  MGH CMA  Maryland Shared Open Access Repository
<b>Publication year</b>	The year when the data was or will be made publicly available. If an embargo period is in effect, use the year when the embargo period ends.	2015  2015  2008
<b>Resource type</b>	The general type of the data.	Dataset  Dataset  Text



## QUICK START GUIDE: ADVANCED CREATE FOR DOIS

Using EZID's UI to create a DOI, you must provide DataCite metadata.  
Mandatory DataCite properties are indicated with an asterisk (\*).

Property	Description	Notes
<b>Creator* (repeats)</b>	The main researchers involved in producing the data, or the authors of the publication, in priority order. Mandatory	Personal, corporate, or institutional name(s)
<b>Title* (repeats)</b>	A name or title by which a resource is known. Mandatory	Free text
<b>Publisher*</b>	The name of the entity that holds, archives, publishes, prints, distributes, releases, issues, or produces the resource. Mandatory	Free text
<b>PublicationYear*</b>	The year when the data was or will be made publicly available. Mandatory	YYYY
<b>ResourceType</b>	A description of the resource. Uses a controlled vocabulary. Recommended, but <i>will become mandatory in next version</i> .	See Quick Start Guide for controlled list
<b>Subject (repeats)</b>	Subject, keyword, classification code, or key phrase describing the resource. Recommended	Free text
<b>Contributor (repeats)</b>	The institution or person responsible for collecting, managing, distributing, or otherwise contributing to the development of the resource. Recommended	See Quick Start Guide for controlled list. Works with ORCIDs.
<b>Date (repeats)</b>	Different dates relevant to the work. Recommended	Uses W3CDTF formats
<b>Language</b>	The primary language of the resource. Optional	Allowed values are taken from IETF BCP 47, ISO 639-1 language codes
<b>AlternateIdentifier (repeats)</b>	An identifier or identifiers other than the primary Identifier applied to the resource being registered. Optional	Free text
<b>RelatedIdentifier (repeats)</b>	Identifiers of related resources. (Must be globally unique.) Recommended	See Quick Start Guide for controlled list
<b>Size (repeats)</b>	Unstructured size information about the resource. Optional	Free text
<b>Format (repeats)</b>	Technical format of the resource. Optional	Free text
<b>Version</b>	The version number of the resource. Suggested practice: track major_version.minor_version. Optional	Free text
<b>Rights (repeats)</b>	Any rights information for this resource. Optional	Free text
<b>Description (repeats)</b>	All additional information that does not fit in any of the other categories. May be used for technical information. Recommended	Abstract strongly suggested
<b>GeoLocation (with point and box sub-properties)</b>	Spatial region or named place where the data was gathered or about which the data is focused. Recommended	Can use WGS 84 (World Geodetic System) coordinates or free text

For details about field constraints and all sub-properties, see <http://schema.datacite.org>