

The DPLA API

Code4Lib — 9 Feb 2015 — Portland, OR

<http://bit.ly/c4l15-dpla-api>

Introduction

- Workshop goals
- Overview of workshop structure
- DPLA staff intros

<http://bit.ly/c4l15-dpla-api>

Overview

- API Basics
- Getting a DPLA API key
- Your first API request
- Requests in depth
- DPLA Metadata
- Clients, resources, and app ideas
- **BREAK** —
- Building an app

<http://bit.ly/c4l15-dpla-api>

DPLA: A Portal for Discovery



A Wealth of Knowledge

explore 8,417,029 items from libraries, archives, and museums



Exhibitions

[View all »](#)



**Explore
by Place**

[Map »](#)

Explore by Date

[Timeline »](#)



1946 1947 1948 **1949** 1950 1951 1952

Apps

The DPLA is a platform. Developers make apps that use the library's data in many different ways. Here are just a few. [App Library »](#)

News



[From Book Patrol: Happy New Calendar!](#)
Jan 9

DPLA: A Platform to Build On

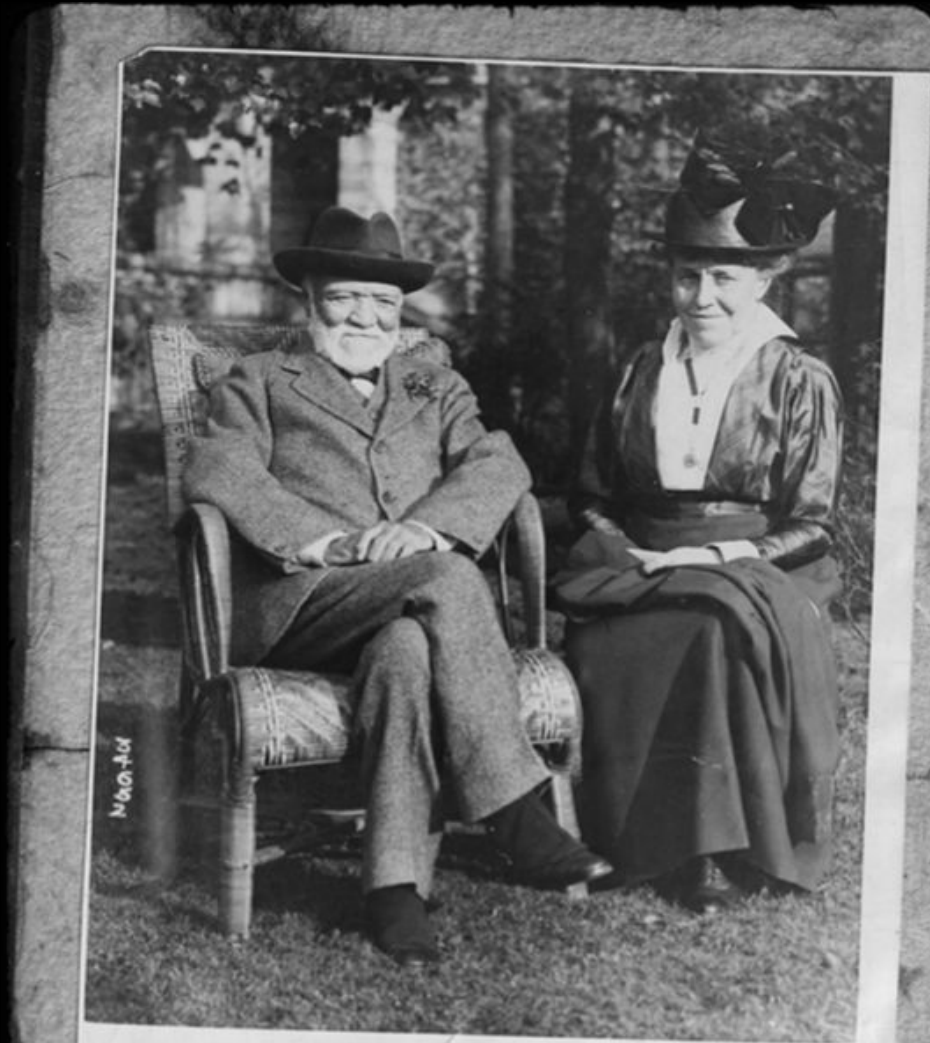
DPLA
hack!

Let your sources surprise you.

SERENDIP-o-MATIC

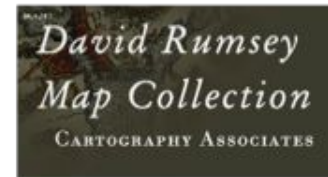


DPLA & the Public Option



Andrew Carnegie and wife. Courtesy Boston Public Library via Digital Commonwealth

DPLA Hubs



DPLA data store



metadata in



JSON-LD out



But really, what's an API?


- Method of communication with another software system
- Defines “language” for interaction
- Provides a structure for making requests of that system
- Also provides a structure for responses from that system



Requesting an API Key

- Send a HTTP POST request to:
`http://api.dp.la/v2/api_key/your@email.com`
- For example (using cURL):
`curl -X POST http://api.dp.la/v2/api_key/me@me.us`
- **Let us know if you need help!**
- Other tools (please install them!):
 - Chrome: [Postman](#), [JSONView](#)
 - Firefox: [RESTClient](#), [JSONView](#)




Requesting an API Key

Postman:

Normal Basic Auth Digest Auth OAuth 1.0  No environment ▼

http://api.dp.la/v2/api_key/me@code4lib.org POST  

REST Easy:

POST ▼ http://api.dp.la/v2/api_key/me@code4lib.org    

Response:

```
{"message": "API key created and sent via email. Be sure to check  
your Spam folder, too."}
```

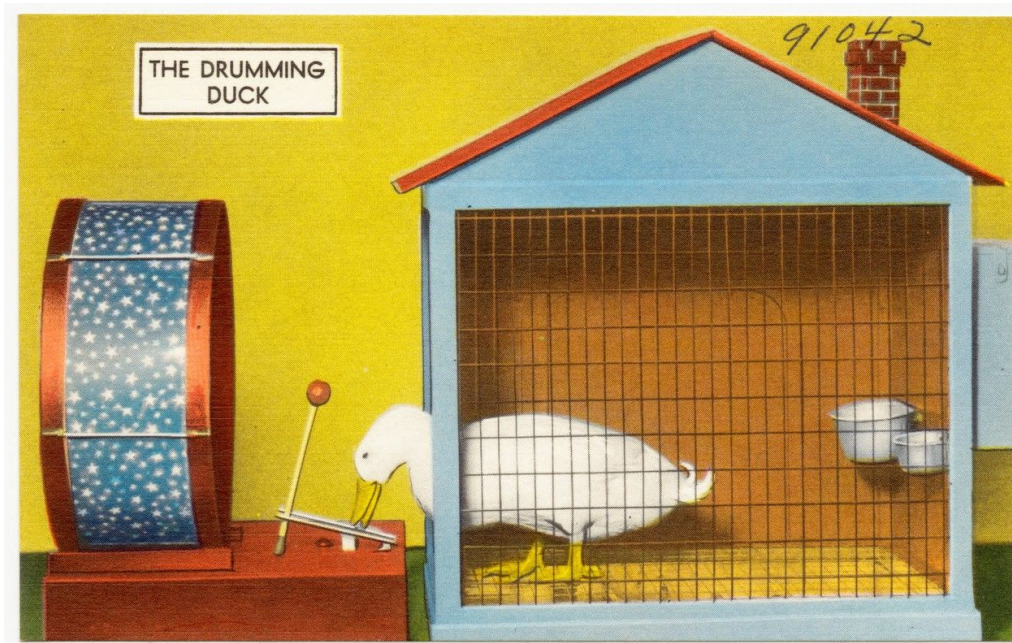
Anatomy of API Request



No matter what software tool you use to communicate with the DPLA API (web browser, Postman, cURL, JavaScript, etc.), the anatomy of the API request will always be the same.

First API Request

I want all of the items in the DPLA that have to do with ducks.



First API Request

Step 1: Base URL:

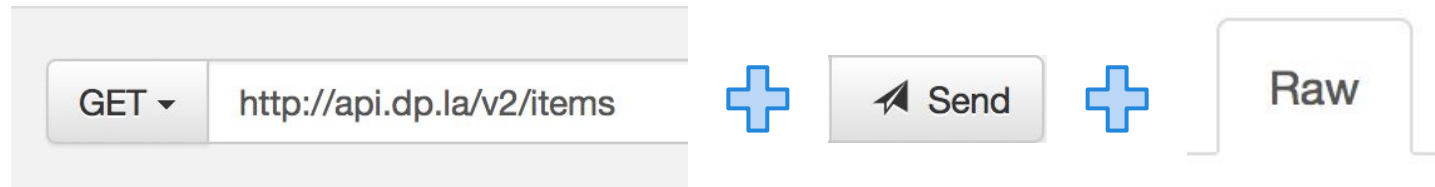
http://api.dp.la/v2/items

Postman:



The Postman interface shows a request configuration. At the top, there are tabs for 'Normal', 'Basic Auth', 'Digest Auth', and 'OAuth 1.0'. To the right of these tabs is an eye icon and a dropdown menu labeled 'No environment'. Below the tabs is a text input field containing the URL 'http://api.dp.la/v2/items'. To the right of the URL is a dropdown menu showing 'GET'. Further right is a blue plus icon, and at the far right is a blue button labeled 'Send'.

REST Easy:



The REST Easy interface shows a request configuration. It features a dropdown menu with 'GET' selected, followed by a text input field containing the URL 'http://api.dp.la/v2/items'. To the right of the URL is a blue plus icon, followed by a button with a paper plane icon and the text 'Send'. To the right of the 'Send' button is another blue plus icon, and at the far right is a button labeled 'Raw'.

Response:

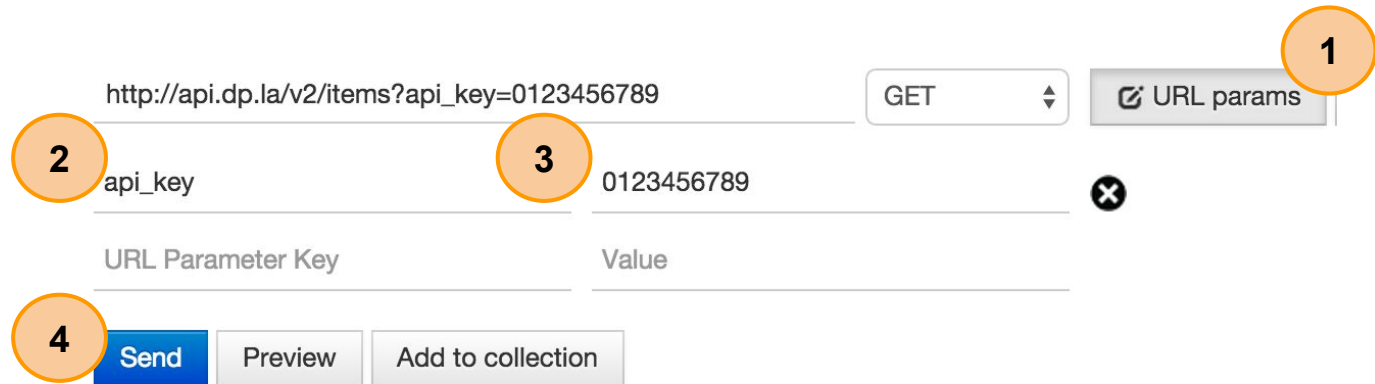
```
{"message": "Unauthorized: Missing, invalid or inactive api_key"}
```

First API Request

Step 2: API Key:

http://api.dp.la/v2/items?api_key=0123456789

Postman:



Response:

```
{  count: 8417029,  [...] }
```

This request returns all of the items in the DPLA.

First API Request

Step 3: Query term

http://api.dp.la/v2/items?api_key=0123456789&q=ducks

Add the query term parameter using the same steps you used to add your api key.

Response:

```
{
  count: 1635,
  start: 0,
  limit: 10,
  - docs: [
    - {
      @context: "http://dp.la/api/items/context",
      isShownAt: "http://utah-primoprod.hosted.exlibrisgroup.com/primo\_libr
      dataProvider: "Arizona State Library, Archives and Public Records",
```

This request returns items with "ducks" anywhere in any field.

First API Response

Responses are JSON-LD

Response:

```
{
  count: 1635,
  start: 0,
  limit: 10,
  - docs: [
    - {
      @context: "http://dp
      isShownAt: "http://u
      dataProvider: "Arizon
      @type: "ore:Aggregat
    - provider: {
      @id: "http://dp.l
```

count = the number of matches for a query

start = the index of the first document

limit = the number of documents returned

docs = array of documents

Full documentation: <http://dp.la/info/developers/codex/responses/>


More requests!

Let's try some more requests!

- What do you want?
 - Booleans & wildcards
 - Searching within fields
- How do you want it?
 - Fetching certain fields
 - Sorting and faceting
 - Pagination
- Fetching specific items

Full documentation: <http://dp.la/info/developers/codex/requests/>

Booleans & Wildcards



Don't forget to
include your
API key param!

AND

q=ducks+AND+geese

This returns all items with both "ducks" and "geese" in any field.

OR

q=ducks+OR+geese

This returns all items with either "ducks" or "geese" in any field.

Wildcard

q=migrat*

This returns all items with "migration", "migrating", "migrate," etc. in any field.

Searching within Fields

Textual

You can search for terms with almost any textual field.

sourceResource.title=duck

Items with duck anywhere in the title.

Temporal

sourceResource.date.after=1910

&sourceResource.date.before=1920

Items created between 1910 and 1920

Spatial

sourceResource.spatial=oregon

Items that are in or about Oregon

Fetching certain fields

If you don't want the whole document, you can fetch only certain fields.

Single Field

fields=sourceResource.title

Returns title field only.

Multiple Fields

fields=id,sourceResource.title

Returns id and title fields.

Sorting results

Sort by title

sort_by=sourceResource.title

Sort by distance to Boston

sort_by_pin=42.3,-71

&sort_by=sourceResource.spatial.coordinates

Faceting Results

Facets tell you the most common values within your results for specified fields.

facets=sourceResource.publisher

Scroll to the bottom of your results to see facets:

```
- facets: {  
  - sourceResource.publisher: {  
    _type: "terms",  
    missing: 4647654,  
    total: 3941839,  
    other: 3087651,  
    - terms: [  
      - {  
        term: "University of Southern California. Libraries",  
        count: 296885
```


Pagination

By default, you will get 10 items (ie. “docs”).
Get the next ten items by incrementing **page**.

page=2

Pull more items per page with **page_size**.

page_size=100

You can use **page** and **page_size** in combination.

page=2&page_size=100

*Check the **start** and **limit** values in your results to see **page** and **page_size** at work.*

Fetching a specific item

If you know the ID of the item you want, you can fetch it.

[http://api.dp.la/v2/items/3bddac9b162f90e304fc24cf078ff2a
?api_key=0123456789](http://api.dp.la/v2/items/3bddac9b162f90e304fc24cf078ff2a?api_key=0123456789)

Combining Parameters

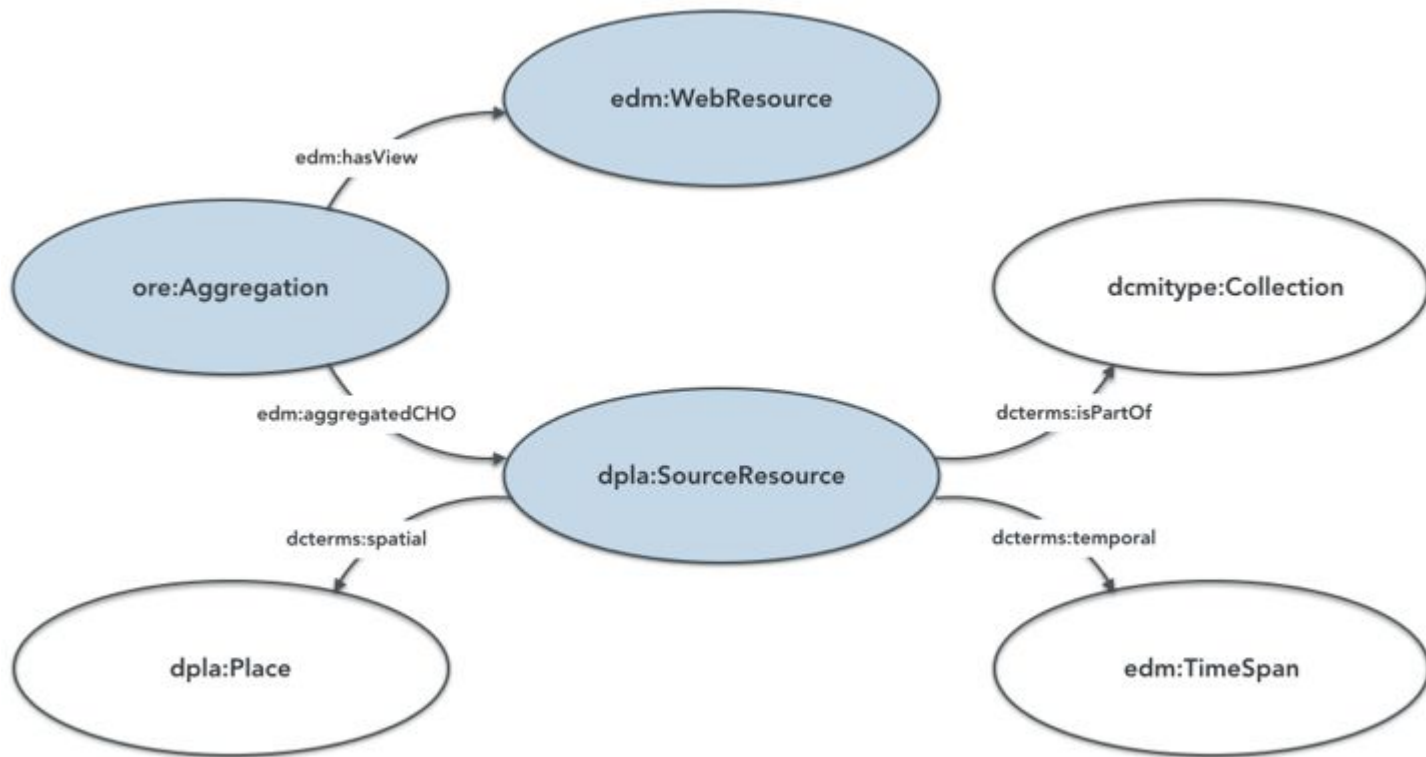
Combine parameters to get exactly what you want.

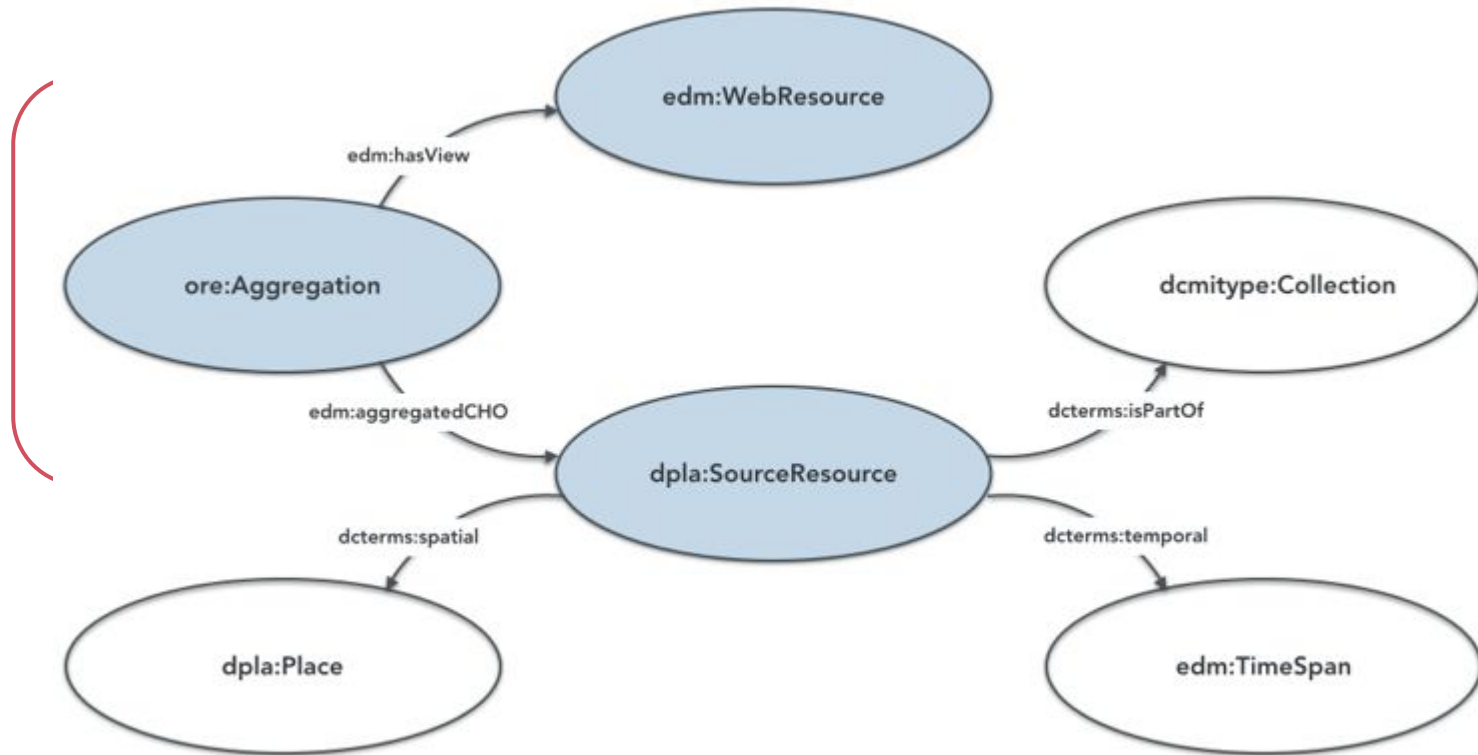
```
q=duck+OR+goose  
&sourceResource.date.after=1910  
&provider.name=smithsonian  
&fields=id,sourceResource.title  
&sort_by=sourceResource.date.begin  
&facets=sourceResource.type  
&page_size=20  
&api_key=0123456789
```

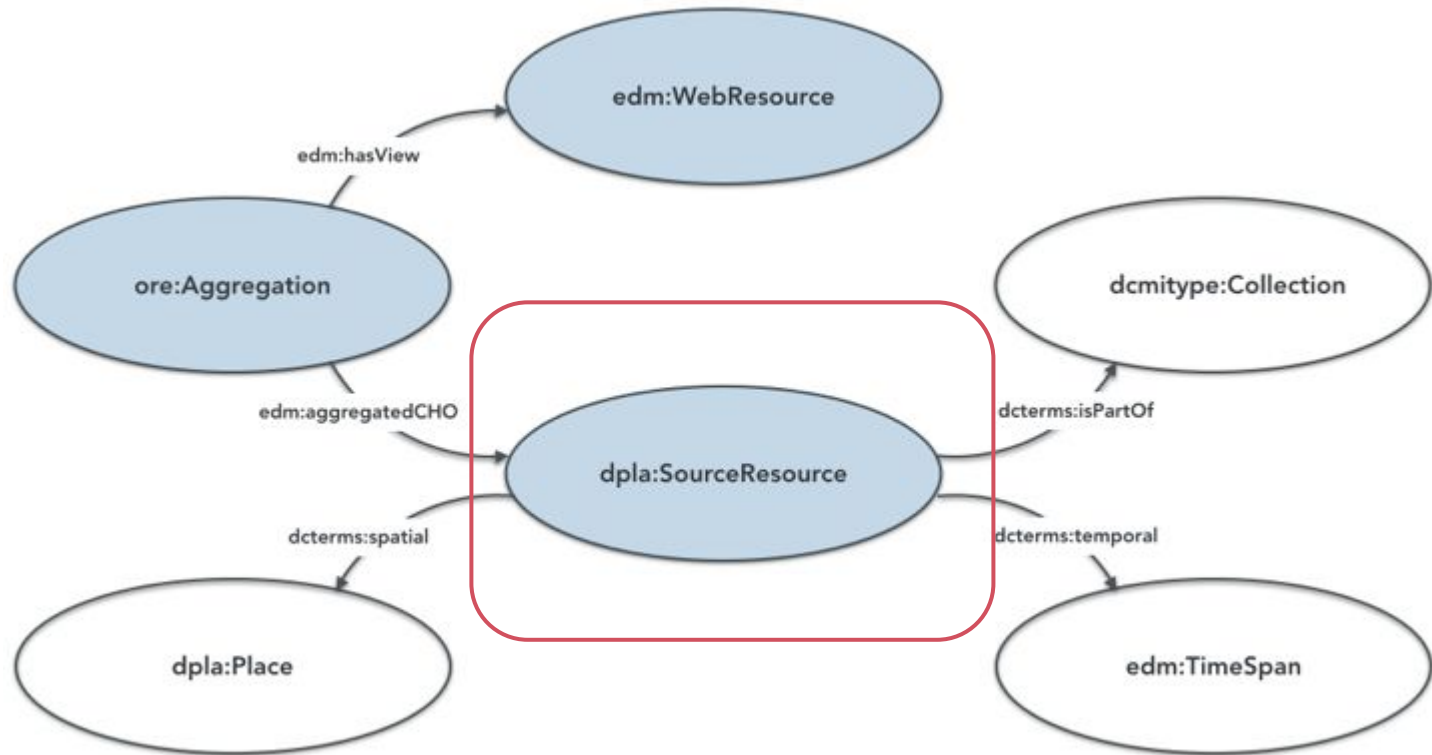
DPLA's Metadata Application Profile

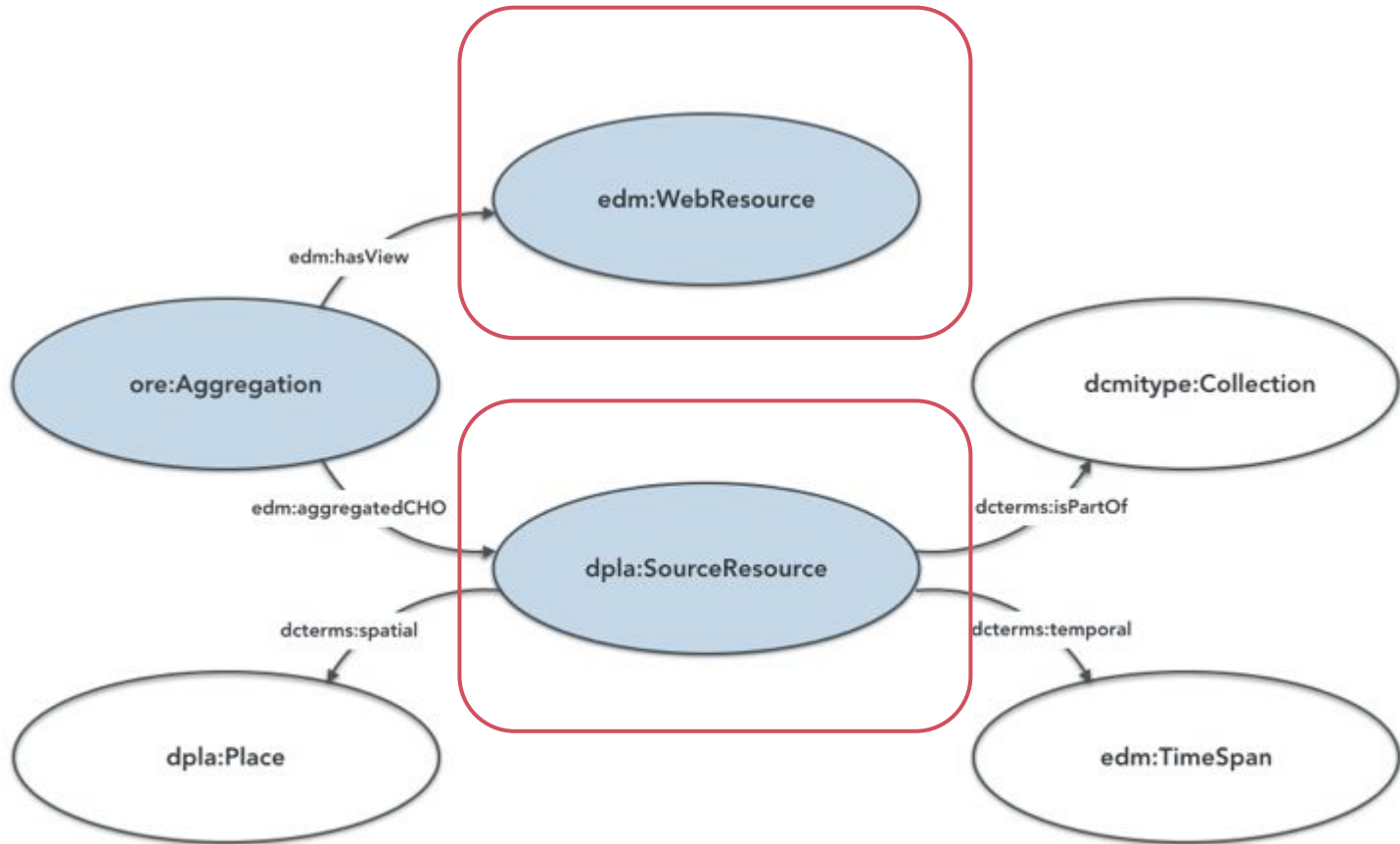
History

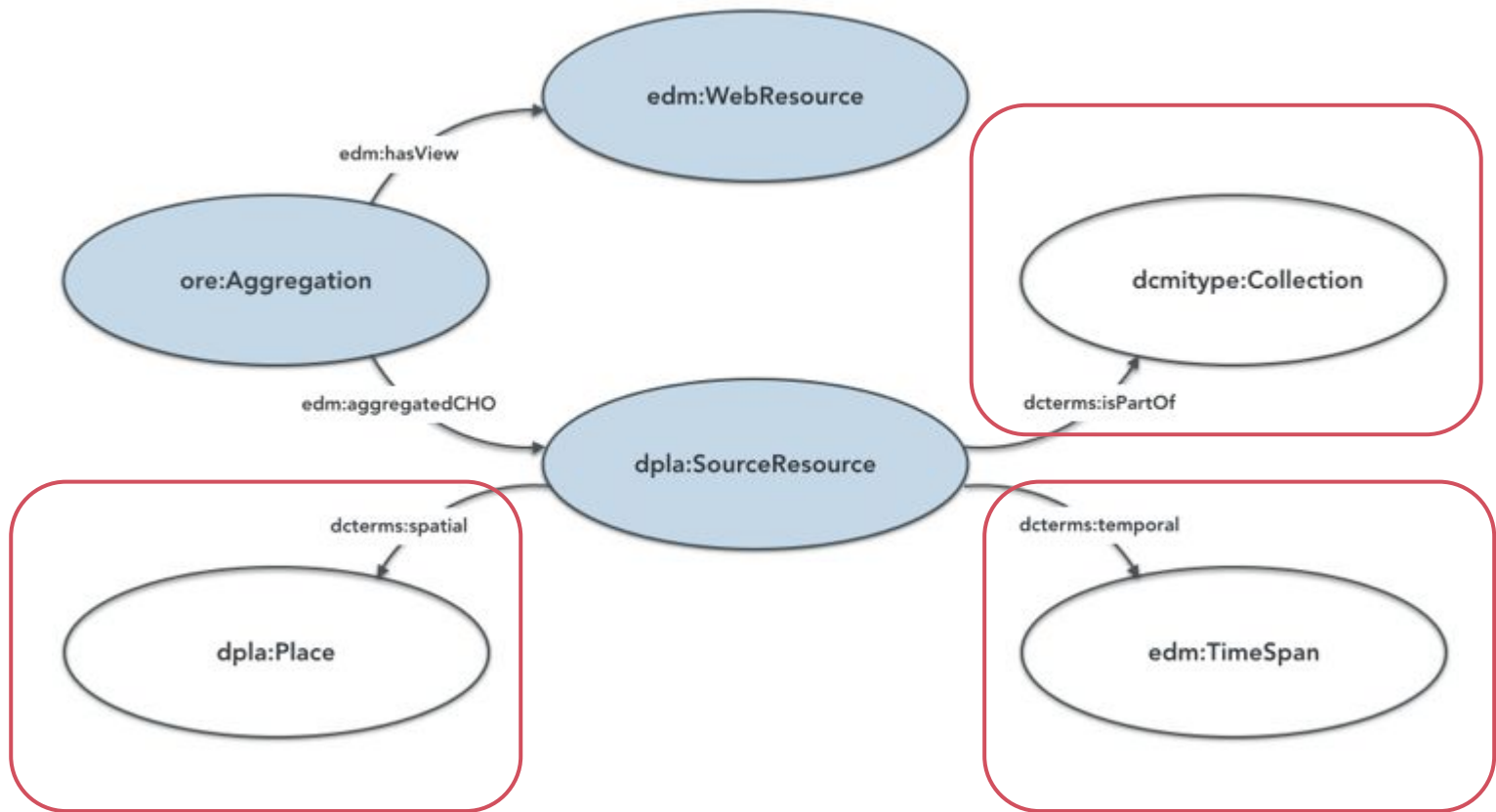
- Originally developed between 2012 and 2013
- Based on the Europeana Data Model
- Currently in version 3.1
- Undergoing update to version 4











Namespaces

- Dublin Core (dc): <http://purl.org/dc/elements/1.1/>
- Dublin Core Terms (dcterms): <http://purl.org/dc/terms/>
- DCMI Type Vocabulary (dcmitype): <http://purl.org/dc/dcmitype/>
- Europeana Data Model (edm): <http://www.europeana.eu/schemas/edm/>
- OAI Object Reuse and Exchange (ore): <http://www.openarchives.org/ore/terms/>
- Resource Description Framework (rdf): <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
- World Geodetic System (wgs84): http://www.w3.org/2003/01/geo/wgs84_pos#

dpla:SourceResource

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Collection*	dcterms:isPartOf, <i>.sourceResource. collection</i>	URI of collection or aggregation of which SR is a part		min 0, max unbounded
Contributor	dc:contributor, <i>.sourceResource. contributor</i>	Entity responsible for making contributions to SR		min 0, max unbounded
Creator*	dc:creator, <i>.sourceResource. creator</i>	Entity primarily responsible for making SR		min 0, max unbounded
Date*	dc:date, <i>.sourceResource.date</i>	Date value as supplied by data provider	W3CDTF, EDTF, local	min 0, max unbounded

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Description	dc:description, <i>.sourceResource.description</i>	Includes but is not limited to: an abstract, a table of contents, or a free-text account of SR		min 0, max unbounded
Extent	dcterms:extent, <i>.sourceResource.extent</i>	Size or duration of SR		min 0, max unbounded
Format*	dc:format, <i>.sourceResource.format</i>	File format, physical medium or dimensions of SR		min 0, max unbounded
Identifier	dc:identifier, <i>.sourceResource.identifier</i>	ID of SR within a given context		min 0, max unbounded
Language*	dc:language, <i>.sourceResource.language</i>	Language(s) of SR. Strongly recommended for text materials.	dcterms: iso6393	min 0, max unbounded

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Place*	dcterms:spatial, <i>.sourceResource.spatial</i>	Spatial characteristics of SR (usually a literal value in this version)		min 0, max unbounded
Publisher*	dc:publisher, <i>.sourceResource. publisher</i>	Entity responsible for making the SR available, typically the publisher of a text (not edm:dataProvider or edm:provider)		min 0, max unbounded
Relation	dc:relation, <i>.sourceResource. relation</i>	Related resource		min 0, max unbounded

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Rights*	dc:rights, <i>.sourceResource.rights</i>	Information about rights held in and over SR. Typically, rights information includes a statement about various property rights associated with SR, including intellectual property rights.		min 1, max unbounded
Genre	edm:hasType, <i>.sourceResource.specType</i>	Captures categories of objects in a given field. Does not capture aboutness.		min 0, max unbounded
State Located In	edm:currentLocation, <i>.sourceResource.stateLocatedIn</i>	Name of the state in which the SR is held	dcterms: iso3166 [1,2]	0 to 1

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Subject*	dc:subject <i>.sourceResource.subject</i>	Topic of SR. <i>In JSON-LD, the property is an object with a name property, which maps to skos:prefLabel.</i>		min 0, max unbounded
Title*	dc:title <i>.sourceResource.title</i>	Primary name given to SR		min 1, max unbounded
Type*	dc:type, <i>.sourceResource.type</i>	Nature or genre of SR	dcmitype	min 0, max unbounded

edm:WebResource

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligatio n
File Format	dc:format, <i>.[property].format</i>	Web resource format	dcterms: imt	min 0, max unbound ed
Rights	dc:rights, <i>.[property].rights</i>	Statement about various property rights associated with the webResource, including intellectual property rights.		min 0, max unbound ed

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligatio n
Standardize d Rights Statement*	edm:rights, <i>.[property]. edmRights</i>	A property that will be mandatory in future releases. The value given here should be the rights statement that applies to the digital representation as given (for example) in edm:object or edm:isShownAt/By, when these resources are not provided with their own edm:rights. This property requires a controlled set of values.	dcterms: URI	0 to 1

ore:Aggregation

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligatio n
Aggregated SR	edm: aggregatedCHO, <i>.aggregatedCHO</i>	Unambiguous ID to SR	dcterms: URI	1
Data Provider*	edm:dataProvider, <i>.dataProvider</i>	The organization or entity that supplies data to DPLA through a Provider. If a Data Provider provides data directly to DPLA (i.e. not via an aggregator) the values in edm:dataProvider and edm:provider will be the same.		1

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Digital Resource Source Record	dpla:originalRecord, <i>.originalRecord</i>	Complete original record.		1
Intermediate Provider	dpla: intermediateProvider , <i>.intermediateProvider</i>	An intermediate organization that selects, collates, or curates data from a Data Provider that is then aggregated by a Provider from which DPLA harvests. The organization must be distinct from both the Data Provider and the Provider in the data supply chain.		min 0, max 1
Is Shown At*	edm:isShownAt, <i>.isShownAt</i>	Unambiguous URL reference to digital object in its full information context.	dcterms:URI	1
Object*	edm:object, <i>.object</i>	Unambiguous URL to the DPLA content preview.	dcterms:URI	1

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligatio n
Provider*	edm:provider, <i>.provider</i>	In the DPLA context, a Service or Content Hub providing access to the Data Provider's content. May contain the same value as Data Provider. (literal value in this version)		1
Standardize d Rights Statement*	edm:rights, <i>.rights</i>	A property that will be mandatory in future releases. The value given here should be the rights statement that applies to the digital representation as given (for example) in edm:object or edm:isShownAt/By, when these resources are not provided with their own edm:rights. This property requires a controlled set of values.	dcterms:URI	0 to 1

dcmitype:Collection

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Collection Title*	dc:title, .sourceResource. collection.title	Name of the collection or aggregation		0 to 1
Collection Description*	dc:description, .sourceResource. collection.description	Free-text account of aggregation, for example an abstract or content scope note		0 to 1

dpla:Place

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Name	skos:prefLabel, <i>.sourceResource.spatial. name</i>	Place name as mapped from partner data		1
City	dpla:city, <i>.sourceResource.spatial. city</i>	Name of a city (literal)		0 to 1
State	dpla:state, <i>.sourceResource.spatial. state</i>	ISO 3166-2 code for a U. S. state or territory	dcterms: iso3166[1,2]	0 to 1
County	dpla:county, <i>.sourceResource.spatial. county</i>	Name of a U.S. county (literal)		0 to 1

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligation
Region	dpla:region, <i>.sourceResource.spatial. region</i>	Name of a region, e.g., "Upstate New York" (literal)		0 to 1
Country	dpla:country, <i>.sourceResource.spatial. country</i>	ISO 3166-1 code for a country	dcterms: iso3166[1,2]	0 to 1
Coordinates	wgs84_pos:lat_long, <i>.sourceResource.spatial. coordinates</i>	Latitudinal and longitudinal coordinates for the most specific geographic location provided	wgs84	0 to 1

edm:TimeSpan

Label	Property, <i>JSON-LD expression</i>	Usage	Syntax Schema or Vocabulary	Obligatio n
Original Source Date*	skos:prefLabel <i>.[property]. displayDate</i>	Date value as supplied by data provider	W3CDTF, EDTF, local	1
Begin	edm:begin <i>.[property].begin</i>	Date timespan started	EDTF	0 to 1
End	edm:end <i>.[property].end</i>	Date timespan finished	EDTF	0 to 1

```

{
  count: 1192,
  start: 0,
  limit: 10,
  docs: [
    - {
      @context: "http://dp.la/api/items/context",
      isShownAt: "http://digitalcollections.nypl.org/items/510d47d9-a883-a3d9-e040-e00a18064a99",
      dataProvider: "Wallach Division: Print Collection. The New York Public Library",
      @type: "ore:Aggregation",
      - provider: {
        @id: "http://dp.la/api/contributor/nypl",
        name: "The New York Public Library"
      },
      object: "http://images.nypl.org/index.php?id=402486&t=t",
      ingestionSequence: 13,
      ingestDate: "2014-09-05T19:12:13.941061Z",
      _rev: "1-f8936a07c64a1bc061a12c1caf0a5a18",
      id: "f5dcc80945a461d8a60c3b2a7afdae4d",
      aggregatedCHO: "#sourceResource",
      _id: "nypl--510d47d9-a883-a3d9-e040-e00a18064a99",
      - sourceResource: {
        - spatial: [
          - {
            name: "London"
          }
        ],
        - subject: [
          - {
            name: "Animals"
          },
          - {
            name: "Lithographs--Hand-colored"
          }
        ],
        rights: "The New York Public Library is interested in learning more about items you've seen on our websites or elsewhere online",
        relation: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839",
        - collection: {
          id: "1c07d2e29d6e95bc06f39a351051f66a",
          title: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839.",
          @id: "http://dp.la/api/collections/1c07d2e29d6e95bc06f39a351051f66a"
        }
      }
    }
  ]
}

```

```

{
  count: 1192,
  start: 0,
  limit: 10,
  docs: [
    {
      @context: "http://dp.la/api/items/context",
      isShownAt: "http://digitalcollections.nypl.org/items/510d47d9-a883-a3d9-e040-e00a18064a99",
      dataProvider: "Wallach Division: Print Collection. The New York Public Library",
      @type: "ore:Aggregation",
      provider: {
        @id: "http://dp.la/api/contributor/nypl",
        name: "The New York Public Library"
      },
      object: "http://images.nypl.org/index.php?id=402486&t=t",
      ingestionSequence: 13,
      ingestDate: "2014-09-05T19:12:13.941061Z",
      _rev: "1-f8936a07c64a1bc061a12c1caf0a5a18",
      id: "f5dcc80945a461d8a60c3b2a7afdae4d",
      aggregatedCHO: "#sourceResource",
      id: "nypl--510d47d9-a883-a3d9-e040-e00a18064a99",
      sourceResource: {
        spatial: [
          {
            name: "London"
          }
        ],
        subject: [
          {
            name: "Animals"
          },
          {
            name: "Lithographs--Hand-colored"
          }
        ],
        rights: "The New York Public Library is interested in learning more about items you've seen on our websites or elsewhere online",
        relation: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839",
        collection: {
          id: "1c07d2e29d6e95bc06f39a351051f66a",
          title: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839.",
          @id: "http://dp.la/api/collections/1c07d2e29d6e95bc06f39a351051f66a"
        }
      }
    }
  ]
}

```



```

count: 1192,
start: 0,
limit: 10,
- docs: [
  - {
    @context: "http://dp.la/api/items/context",
    isShownAt: "http://digitalcollections.nypl.org/items/510d47d9-a883-a3d9-e040-e00a18064a99",
    dataProvider: "Wallach Division: Print Collection. The New York Public Library",
    @type: "ore:Aggregation",
    - provider: {
      @id: "http://dp.la/api/contributor/nypl",
      name: "The New York Public Library"
    },
    object: "http://images.nypl.org/index.php?id=402486&t=t",
    ingestionSequence: 13,
    ingestDate: "2014-09-05T19:12:13.941061Z",
    _rev: "1-f8936a07c64a1bc061a12c1caf0a5a18",
    id: "f5dcc80945a461d8a60c3b2a7afdae4d",
    aggregatedCHO: "#sourceResource",
    _id: "nypl--510d47d9-a883-a3d9-e040-e00a18064a99",
    sourceResource: {
      - spatial: [
        - {
          name: "London"
        }
      ],
      - subject: [
        - {
          name: "Animals"
        },
        - {
          name: "Lithographs--Hand-colored"
        }
      ],
      rights: "The New York Public Library is interested in learning more about items you've seen on our websites or elsewhere online",
      relation: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839",
      - collection: {
        id: "1c07d2e29d6e95bc06f39a351051f66a",
        title: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839.",
        @id: "http://dp.la/api/collections/1c07d2e29d6e95bc06f39a351051f66a"
      }
    }
  }
]

```

```
{
  count: 1192,
  start: 0,
  limit: 10,
  docs: [
    - {
      @context: "http://dp.la/api/items/context",
      isShownAt: "http://digitalcollections.nypl.org/items/510d47d9-a883-a3d9-e040-e00a18064a99",
      dataProvider: "Wallach Division: Print Collection. The New York Public Library",
      @type: "ore:Aggregation",
      - provider: {
          @id: "http://dp.la/api/contributor/nypl",
          name: "The New York Public Library"
        },
      object: "http://images.nypl.org/index.php?id=402486&t=t",
      ingestionSequence: 13,
      ingestDate: "2014-09-05T19:12:13.941061Z",
      _rev: "1-f8936a07c64a1bc061a12c1caf0a5a18",
      id: "f5dcc80945a461d8a60c3b2a7afdae4d",
      aggregatedCHO: "#sourceResource",
      _id: "nypl--510d47d9-a883-a3d9-e040-e00a18064a99",
      - sourceResource: {
          - spatial: [
              - {
                  name: "London"
                }
            ],
          - subject: [
              - {
                  name: "Animals"
                },
              - {
                  name: "Lithographs--Hand-colored"
                }
            ],
          rights: "The New York Public Library is interested in learning more about items you've seen on our websites or elsewhere online",
          relation: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839",
          - collection: {
              id: "1c07d2e29d6e95bc06f39a351051f66a",
              title: "Groups of cattle, drawn from nature, by T.S. Cooper. 1839.",
              @id: "http://dp.la/api/collections/1c07d2e29d6e95bc06f39a351051f66a"
            }
        }
      ]
    }
  ]
}
```



```
- stateLocatedIn: [  
  - {  
    name: "New York"  
  }  
],  
type: "image",  
- date: {  
  displayDate: "1838-1838",  
  end: "1838",  
  begin: "1838"  
},  
- publisher: [  
  "Ackermann & Co"  
],  
- creator: [  
  "Cooper, Thomas Sidney (1803-1902)"  
],  
title: "[Goats.]",  
- contributor: [  
  "Hullmandel, Charles Joseph (1789-1850)"  
],  
description: "Samuel Putnam Avery",  
@id: "http://dp.la/api/items/f5dcc80945a461d8a60c3b2a7afdae4d#sourceResource"  
},  
- admin: {  
  validation_message: null,  
  object_status: 1,  
  - sourceResource: {  
    title: "[Goats.]"  
  },  
  valid_after_enrich: true  
},  
ingestType: "item",  
@id: "http://dp.la/api/items/f5dcc80945a461d8a60c3b2a7afdae4d",  
- originalRecord: {  
  genre: "Lithographs -- Hand-colored",  
  location: {
```

```
- stateLocatedIn: [
  - {
    name: "New York"
  }
],
type: "image",
- date: {
  displayDate: "1838-1838",
  end: "1838",
  begin: "1838"
},
- publisher: [
  "Ackermann & Co"
],
- creator: [
  "Cooper, Thomas Sidney (1803-1902)"
],
title: "[Goats.]",
- contributor: [
  "Hullmandel, Charles Joseph (1789-1850)"
],
description: "Samuel Putnam Avery",
@id: "http://dp.la/api/items/f5dcc80945a461d8a60c3b2a7afdae4d#sourceResource"
},
- admin: {
  validation_message: null,
  object_status: 1,
  - sourceResource: {
    title: "[Goats.]"
  },
  valid_after_enrich: true
},
ingestType: "item",
@id: "http://dp.la/api/items/f5dcc80945a461d8a60c3b2a7afdae4d",
- originalRecord: {
  genre: "Lithographs -- Hand-colored",
  location: [
    "New York, New York, USA"
  ],
  title: "[Goats.]",
  type: "Image"
}
```

```
type: "image",
- date: {
  displayDate: "1838-1838",
  end: "1838",
  begin: "1838"
},
- publisher: [
  "Ackermann & Co"
],
- creator: [
  "Cooper, Thomas Sidney (1803-1902)"
],
title: "[Goats.]",
- contributor: [
  "Hullmandel, Charles Joseph (1789-1850)"
],
description: "Samuel Putnam Avery",
@id: "http://dp.la/api/items/f5dcc80945a461d8a60c3b2a7afdae4d#sourceResource"
},
- admin: {
  validation_message: null,
  object_status: 1,
  - sourceResource: {
    title: "[Goats.]"
  },
  valid_after_enrich: true
},
ingestType: "item",
@id: "http://dp.la/api/items/f5dcc80945a461d8a60c3b2a7afdae4d",
- originalRecord: {
  genre: "Lithographs -- Hand-colored",
  - location: [
    - {
      shelfLocator: "MEM++ (Cooper) (Cooper, T. S. Groups of cattle, drawn from nature)",
      - physicalLocation: [
        - {
          authority: "marcorg"
```

Real World Example

Goats

The DPLA is a platform that enables new and transformative uses of our digitized cultural heritage. The DPLA's application programming interface (API) and open data can be used by software developers, researchers, and others to create novel environments for learning, tools for discovery, and engaging apps.

[Become an App Developer](#)

http://dp.la/apps

1 2 3



Metadata Explorer

Dean Farrell

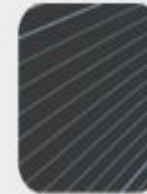
Metadata Explorer is an attempt to explore national digital libraries, pan-national digital libraries and libraries in general, in a different, hopefully useful way.

[App Home Page »](#)


DPLA Item Flow

Dean Farrell

A visualization showing the the flow of hubs into the DPLA.

[App Home Page »](#)


DPLA Partner Flow

Dean Farrell

A visualization showing the flow of items into DPLA hubs from their content providers.

[App Home Page »](#)


DPLA Depositors Visualization

Dean Farrell

Hover over an institution's wedge to see how many items it has contributed to DPLA.

[App Home Page »](#)


DPLA Bookshelf Language Visualization

Dean Farrell

Visually browse books by language and view them on the DPLA Bookshelf.

[App Home Page »](#)


Term Frequency Map

Dean Farrell

See how your search term(s) frequency changes through time in DPLA.

[App Home Page »](#)

Current Ideas & Projects

<http://dp.la/info/developers/ideas-and-projects/current-ideas/>[Share Your Ideas & Projects](#) / [Current Ideas & Projects](#) / [Past Events](#)

This page contains submissions to our open hacking ideas and projects form. Have a great idea for a DPLA app or tool? Share it with the community by filling out [this quick form](#). To see what others have already created using our open API, check out the [App Library](#).

Tell us about your idea	What should we call it?	Who should do it?	Name (Affiliation)(Email)	Anything else to add?	Date
Try to match Creator names in DPLA to NY Times obituaries. The app would find all items by a person and then link them to that person's obit to learn more about them. It might search beyond creator (potentially for genealogical research?) and help to mine birth/death dates to establish qualities like copyright. I realize the subset of names would be small but it's the same idea as linking to Wikipedia except with a more reliable "scholarly acceptable" (loaded concept - I know) source.	Dead but not forgotten. Hmmm probably too morbid	I'd like someone else to do it.	Amy Rudersdorf (DPLA) (amy@dp.la)	I'm pretty sure I stole the idea from someone so if that someone comes forward I will totally give them credit	6/18/14
There should be a keyboard mapping tool that allows users to search bibliographic data that uses extended Latin characters by their nearest Latin equivalent. For instance: in the case of ANSEL characters this is already well-supported for characters like the Turkish dotless i (i) and the Polish l with stroke (ł). The same functionality is not yet widely supported for characters commonly found in African bibliographic data such as open o (ɔ) used in Akan and eng (ɛ̃) used in Mande languages. Native American languages including Sioux would also stand to benefit. Although I cannot do the code myself I'd be happy to supply data including equivalencies to anyone wanting to map between input and stored data in this regard.	Keyhopper	I'd like someone else to do it.	Charles Riley (Yale University Library) (charles.riley@yale.edu)	Could also be useful for certain Greek and Cyrillic use cases—although mapping in the direction of input in Cyrillic to data in Latin would be potentially problematic (as in phishing).	8/26/14
Perma.cc aims to eliminate link-rot in publications. With Perma.cc any author can go to the Perma.cc website and input a URL. Perma.cc downloads the material at that URL and gives back a new URL (a "Perma.cc link") that can then be inserted in a paper. Perma.cc is partnering with libraries like DPLA in a number of ways. One of the key partnership areas is that of	Perma.cc vesting	I'd like someone else to do it.	Sam Klein	Idea proposed as part of DPLAfest workshop.	11/16/13

Clients & Resources

<http://bit.ly/dpla-sample-code>

<https://github.com/dpla/dpla-discovery>

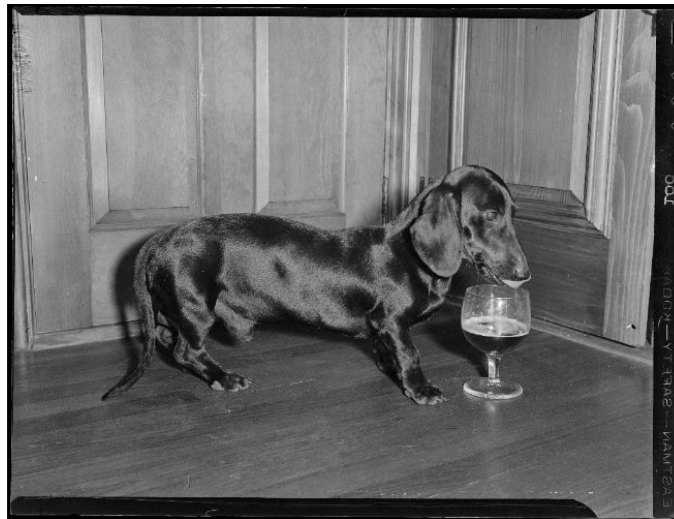
- DPyLA (Python)
- PHP-DPLA
- rDPLA (R)
- Plus others for Java, Node.js, etc...

Building an app

Wrap-Up

What we've accomplished:

- Got API key
- Practiced a variety of requests
- Interpreted DPLA MAP metadata
- Located DPLA API documentation
- Started building an app using the DPLA API



Great job!
Let's celebrate.

Leslie Jones. [Dachshund drinking from a water glass](#)

Stay involved!

Blog: <http://dp.la/info/news/>

Twitter: @dpla

Apps library: <http://dp.la/apps>

Become a community rep!

<http://dp.la/info/get-involved/rep/>

Open calls: <http://dp.la/info/get-involved/open-calls/>

DPLAFest 2014, Indianapolis, April 17-18

<http://dp.la/info/get-involved/dplafest/april-2015/>

Feedback survey

Please give us your feedback!

<https://www.surveymonkey.com/s/DZ9F27F>

<http://bit.ly/c4l15-dpla-api>