



BCLibraries

COOPERATIVE

<http://opendatahandbook.org/en/what-is-open-data/>

Liam Whalen - May 14, 2015

What is Open?

This handbook is about open data - but what exactly is *open* data? For our purposes, open data is as defined by the Open Definition:

Open data is data that can be freely used, reused and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike.

The full Open Definition gives precise details as to what this means. To summarize the most important:

- **Availability and Access:** the data must be available as a whole and at no more than a reasonable reproduction cost, preferably by downloading over the internet. The data must also be available in a convenient and modifiable form.
- **Reuse and Redistribution:** the data must be provided under terms that permit reuse and redistribution including the intermixing with other datasets.
- **Universal Participation:** everyone must be able to use, reuse and redistribute - there should be no discrimination against fields of endeavour or against persons or groups. For example, 'non-commercial' restrictions that would prevent 'commercial' use, or restrictions of use for certain purposes (e.g. only in education), are not allowed.

If you're wondering why it is so important to be clear about what open means and why this definition is used, there's a simple answer: **interoperability**.

Interoperability denotes the ability of diverse systems and organizations to work together (inter-operate). In this case, it is the ability to interoperate - or intermix - different datasets.

Interoperability is important because it allows for different components to work together. This ability to componentize and to 'plug together' components is essential to building large, complex systems. Without interoperability this becomes near impossible — as evidenced in the most famous myth of the Tower of Babel where the (in)ability to communicate (to interoperate) resulted in the complete breakdown of the tower-building effort.

We face a similar situation with regard to data. The core of a "commons" of data (or code) is that one piece of "open" material contained therein can be freely intermixed with other "open" material. This interoperability is absolutely key to realizing the main practical benefits of "openness": the dramatically enhanced ability to combine different datasets together and thereby to develop more and better products and services (these benefits are discussed in more detail in the section on 'why' open data).

Providing a clear definition of openness ensures that when you get two open datasets from two different sources, you will be able to combine them together, and it ensures that we **avoid our own 'tower of babel': lots of datasets but little or no ability to combine them together into the larger systems where the real value lies.**

What Data are You Talking About?

- What is Open?
- What Data are You Talking About?

How to Open up Data

So I've Opened Up Some Data, Now What?

Glossary

Appendices

Contribute

Corrections and suggestions for improvements can be submitted on our [issue tracker](#). If you are interested in contributing material please get in touch.

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This section of the site lists licenses that are conformant with the principles laid out in the [Open Definition](#).

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The following licenses are conformant with the principles set forth in the Open Definition.

- Domain = Domain of application, i.e. what type of material this license should/can be applied to. Note if you are looking for an open license for software, please see [Open Source Definition conformant licenses](#).
- BY = requires attribution
- SA = require share-alike

Recommended conformant licenses

These licenses conform to the Open Definition and are:

- Reusable: Not specific to an organization or jurisdiction.
- Compatible: Must be compatible with at least one of GPL-3.0+, CC-BY-SA-4.0, and ODbL-1.0. Permissive/attribution-only licenses must be compatible with all 3 of the aforementioned licenses, and at least one of Apache-2.0, CC-BY-4.0, and ODC-BY-1.0.
- Current: Widely used and generally considered best practice by a broad spectrum of projects and actors within the domains of applicability of the license.

License	Domain	By	SA	Comments
Creative Commons CCZero (CC0)	Content, Data	N	N	Dedicate to the Public Domain (all rights waived)
Open Data Commons Public Domain Dedication and Licence (PDDL)	Data	N	N	Dedicate to the Public Domain (all rights waived)
Creative Commons Attribution 4.0 (CC-BY-4.0)	Content, Data	Y	N	
Open Data Commons Attribution License (ODC-BY)	Data	Y	N	Attribution for data(bases)
Creative Commons Attribution Share-Alike 4.0 (CC-BY-SA-4.0)	Content, Data	Y	Y	
Open Data Commons Open Database	Data	Y	Y	Attribution-ShareAlike for

English | Español | Français | Galego | Italiano | Magyar | Indonesian | Islenka | Italiano | Japanese | 한국어 | македонски | Norsk (bokmål) | Polski | Português Brasileiro | Português | Русский | Shqip | Srpski | Svenska | Türkçe | Українська | 简体中文 | 中文



[https:// opendata.dev4.catalogue.libraries.coop:4433/index.html](https://opendata.dev4.catalogue.libraries.coop:4433/index.html)

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```
    "title0": "a novel /The unlikely pilgrimage of Harold Fry :",  
    "author0": "Joyce, Rachel.",  
    "price0": "$29.95",  
    "price1": "$19.95",  
    "subject_heading0": "Fiction. Voyages and travels",  
    "subject_heading1": "FriendshipFiction. ",  
    "subject_heading2": "Great BritainMenFiction.",  
    "subject_heading3": "Fiction. Spouses",  
    "subject_heading4": "Fiction. Great Britain",  
    "isbn_issn0": "9780385677691 (hc.)",  
    "isbn_issn1": "0385677693 (hc.)",  
    "isbn_issn2": "9780385677714 (trade pbk.) :",  
    "pub_date0": "2012.",  
    "single_year_lending_count0": "15",  
    "sitka_record_id0": "107266894",  
    "data_creation_date0": "Mon May 11 16:57:06 2015"  
  },  
{  
  "type": "Feature",  
  "id": "47",  
  "geometry": {  
    "type": "Point",  
    "coordinates": [-126.95172, 50.589949]  
  },  
  "properties": {  
    "library_name0": "Alert Bay Public Library",  
    "title0": "The man from Beijing /",  
    "author0": "Mankell, Henning,",  
    "price0": "$32.00",  
    "subject_heading0": "Fiction.Slavery",  
    "subject_heading1": "Fiction.Slave trade",  
    "subject_heading2": "RevengeFiction. ",  
    "subject_heading3": "SwedenFiction.",  
    "subject_heading4": "Fiction.China",  
    "isbn_issn0": "9780307271860",  
    "isbn_issn1": "0307271862 ",  
    "isbn_issn2": "9780307397850 (hc.) :",  
    "isbn_issn3": "0307397858 (hc.)",  
    "pub_date0": "2010.",  
    "single_year_lending_count0": "14",  
    "sitka_record_id0": "31011068",  
    "data_creation_date0": "Mon May 11 16:57:06 2015"  
  },  
{  
  "type": "Feature",  
  "id": "47",  
  "geometry": {  
    "type": "Point",  
    "coordinates": [-126.95172, 50.589949]  
  },  
  "properties": {  
    "library_name0": "Alert Bay Public Library",  
    "title0": "a novel /Gone girl :",  
    "author0": "Flynn, Gillian,",  
    "price0": "$29.95 Can.",  
    "subject_heading0": "Fiction.Husbands",  
    "subject_heading1": "Married peopleFiction.",  
    "subject_heading2": "WivesFiction.Crimes against",  
    "isbn_issn0": "9780307588364 (hc.)",  
    "pub_date0": "2012.",  
    "single_year_lending_count0": "13",  
    "sitka_record_id0": "107629967",
```



Generating Open Data

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Sample SQL Query

```
SELECT bre.id, ac.circ_lib, COUNT(acn.id) AS count FROM biblio.record_entry AS bre
INNER JOIN asset.call_number AS acn ON bre.id = acn.record INNER JOIN asset.copy AS
acp ON acn.id = acp.call_number INNER JOIN action.circulation AS ac ON acp.id =
ac.target_copy INNER JOIN metabib.record_attr AS mra ON bre.id = mra.id WHERE
ac.circ_lib IN (1301) AND (xact_finish IS NULL OR xact_finish > NOW() - interval '1 year')
AND bre.deleted = false AND mra.attrs @> "search_format"=>"physicalbooks" GROUP BY
ac.circ_lib, acn.id, bre.id ORDER BY ac.circ_lib, count DESC LIMIT 100;
```

GIT Repo For Files Needed to Create the Open Data

<http://git.sitka.bclibraries.ca/gitweb/?p=sitka/opendata-eg2015.git;a=summary>



http://geocoder.ca/?freedata=1

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This data is provided under the [Open Database License \(ODbL\)](#) **You haven't made it until you get sued** [Donate to geocoder.ca's legal defense fund to keep our data free](#)

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Here at Geocoder.ca we provide a number of free geocoded data downloads, to help the community build better location based services.

Check this page often for new additions to our free data collection. If you have a request for a geocoded dataset that is not included in this list, [send us a note](#).

We are serious about providing reliable geocoding business [services](#). These free data downloads showcase the high quality of our geocoding engine and data.

Your Free Data Downloads

Geocoded IP Address List

File of crowdsourced list of geocoded ip addresses. Includes ip address, latitude, longitude (*Last Updated: April 7th 2014*):

- [Geolocated IP Address List](#) (687963 records)

Canadian Postal Codes

File of all Canadian postal codes. Includes postal, city, province, latitude, longitude (*Last Updated: May 23rd 2014*):

- [Canadian Postal Codes](#) (918585)

US Zip Codes

File of all US 5-digit ZIP codes. Includes zip, city, state, latitude, longitude, and county (*Last Updated: March 30th 2010*):

- [US Zip Codes](#) (41,755)

City Centroids

We have a file for both Canada and the US which includes city name, state/province, latitude, and longitude (*Last Updated: January 1, 2010*):

- [Canadian Cities](#) (12,062 cities)
- [US Cities](#) (192,773 cities)

Other Downloads

- [Crowdsourced Street address file](#) 12232909 records. (for the past 6 months) As of November 7, 2014
- [Crowdsourced Canadian Postal Code Polygon File](#) As of May 5, 2013.



https://developers.google.com/maps/documentation/javascript/reference

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Google Maps JavaScript API 8.1 404

Send feedback

GUIDES

Get Started

▸ Authentication and Quota

▸ Concepts

▸ Creating a Map

▸ Drawing on the Map

▸ Displaying data

▸ Services

▸ Libraries

REFERENCE

API Reference - 3.exp (3.20)

API Reference - Release (3.19)

API Reference - Frozen (3.18)

SAMPLES

Overview

▸ Basics

▸ Signed-in Maps

▸ Events

▸ Controls

▸ Styles

▸ Drawing on the Map

▸ Layers

▸ Map Types

▸ Services

▸ Libraries

▸ Places API

SUPPORT

Google Maps JavaScript API V3 Reference

Release Version

Last updated Tuesday, July 29, 2014

This reference documents version 3.19 (the **release** version) of the Maps Javascript API released February 15, 2015. This release version of the API is a feature-stable version of the API whose interfaces are guaranteed to remain as documented within these pages until this version is retired.

To consult the **latest** (experimental) version of the Maps Javascript API, see the [Experimental Development Reference](#).

Reference Table of Contents

Map

- Map
- MapOptions
- MapTypeId

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- MapTypeControlStyle
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- PanControlOptions
- RotateControlOptions
- ScaleControlOptions
- ScaleControlStyle
- StreetViewControlOptions
- ZoomControlOptions
- ZoomControlStyle
- ControlPosition

Data

- Data
- Data.DataOptions
- Data.GeoJsonOptions
- Data.StyleOptions
- Data.StylingFunction
- Data.Feature
- Data.FeatureOptions

The logo for BC Libraries Cooperative consists of three stylized, overlapping geometric shapes in shades of green and blue, arranged in a triangular pattern. Below the shapes, the text "BCLibraries" is written in a bold, sans-serif font, with "COOPERATIVE" in a smaller, all-caps font underneath.

METADATA AND MAPS - LIAM WHALEN

THE BC LIBRARIES COOPERATIVE 6

Converting ArcGIS to GeoJSON OpenData

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The data sets converted to GeoJSON were marked public at DataBC

DataBC at www.data.gov.bc.ca

Note the output file comes before the input file in the syntax

```
./ogr2ogr.py -f geoJSON geojson/prov_lib_data.json ./shpfiles/  
BC_Public_Library_Systems_Locations_and_Branch_Data.shp
```

The American Context

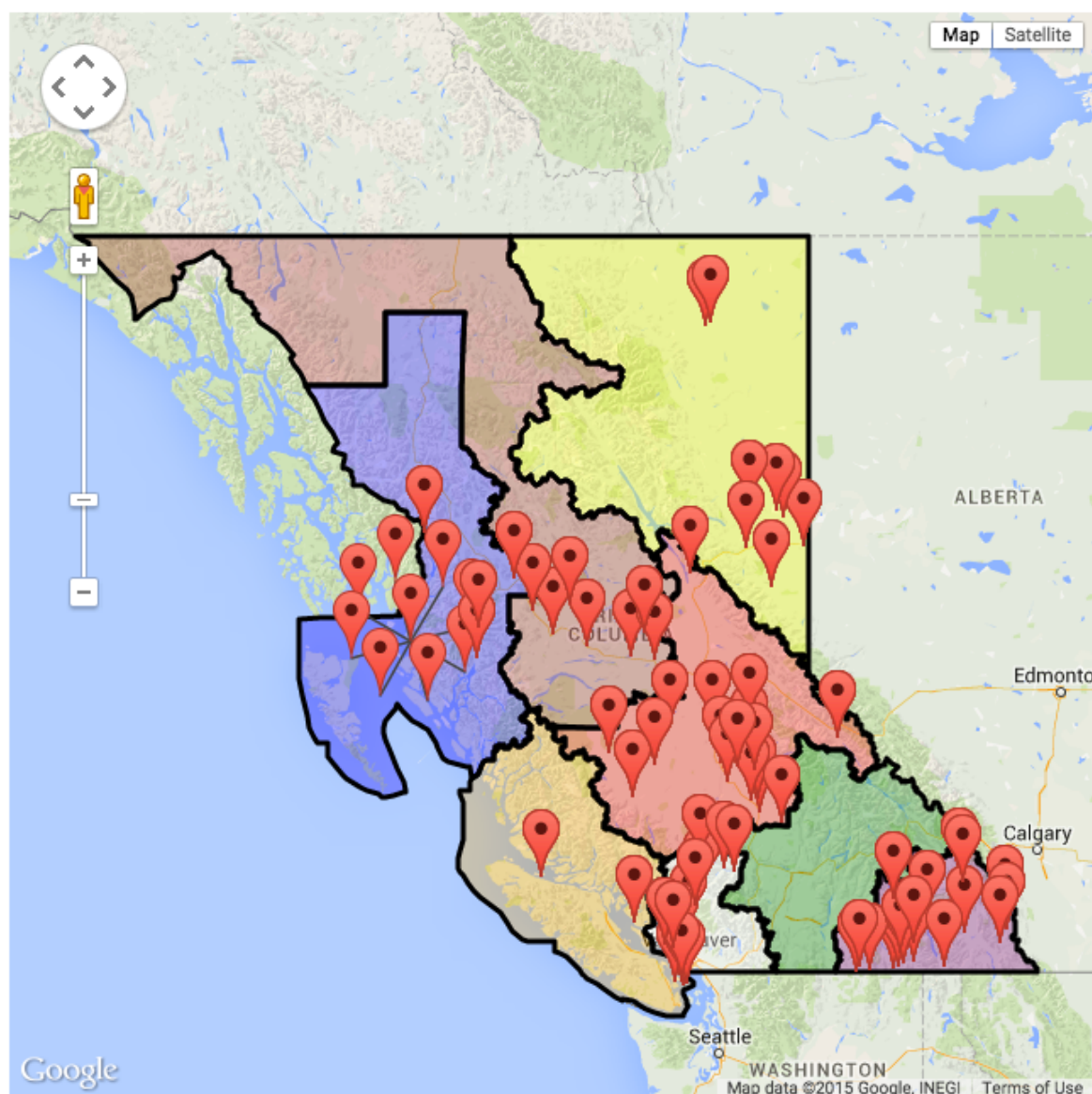
data.gov at <https://www.data.gov/>

This site is packed with tons of data, and from a casual browsing the vast majority of it is available in Open formats.



Library Book Data

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Library Book Data

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Combination of generated GeoJSON and 2011 Census Economic Regions data from DataBC.

Uses the Spiderfy javascript library to allow the Markers to radiate outwards allowing the display of the 8 most highly lent books per library.

<https://github.com/jawj/OverlappingMarkerSpiderfier>

GeoJSON automatically loaded by Google Maps' API.



Average Price / Per Average Lend Heat Map

