Publication, dissemination and network collaboration in the documentation of digital collections of memory institutions: interoperability between the information environments Wikidata, Wikimedia Commons, Wikipedia and the free software Tainacan

SWIB21
Semantic Web in Libraries

Dalton Martins
daltonmartins@unb.br
November, 2021

https://unsplash.com/photos/FFBkz2lOTkE

Tainacan

UnB

A UnB quem faz
é a gente

Where am I from?

University of Brasília

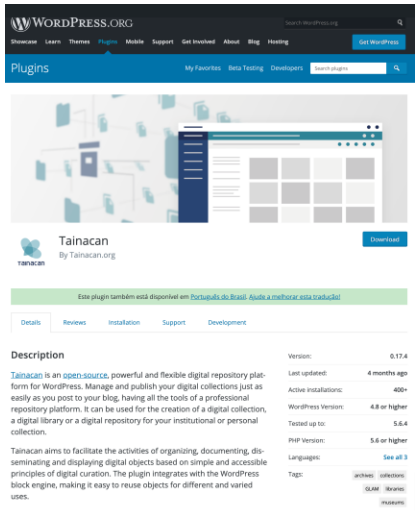
Faculty of Information Science

Let's get started...

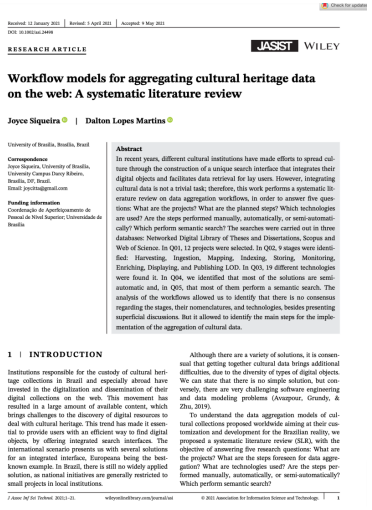
An **overview** of our research

Research and development of solutions for digital collections

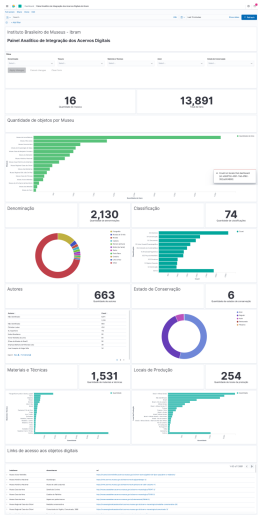
Training material and **project management support**: technological maturity diagnosis



Software for organizing, disseminating and managing digital collections: plugins and themes for Wordpress



Scientific research in **masters, doctorates, scientific initiation** in topics related to digital cultural heritage



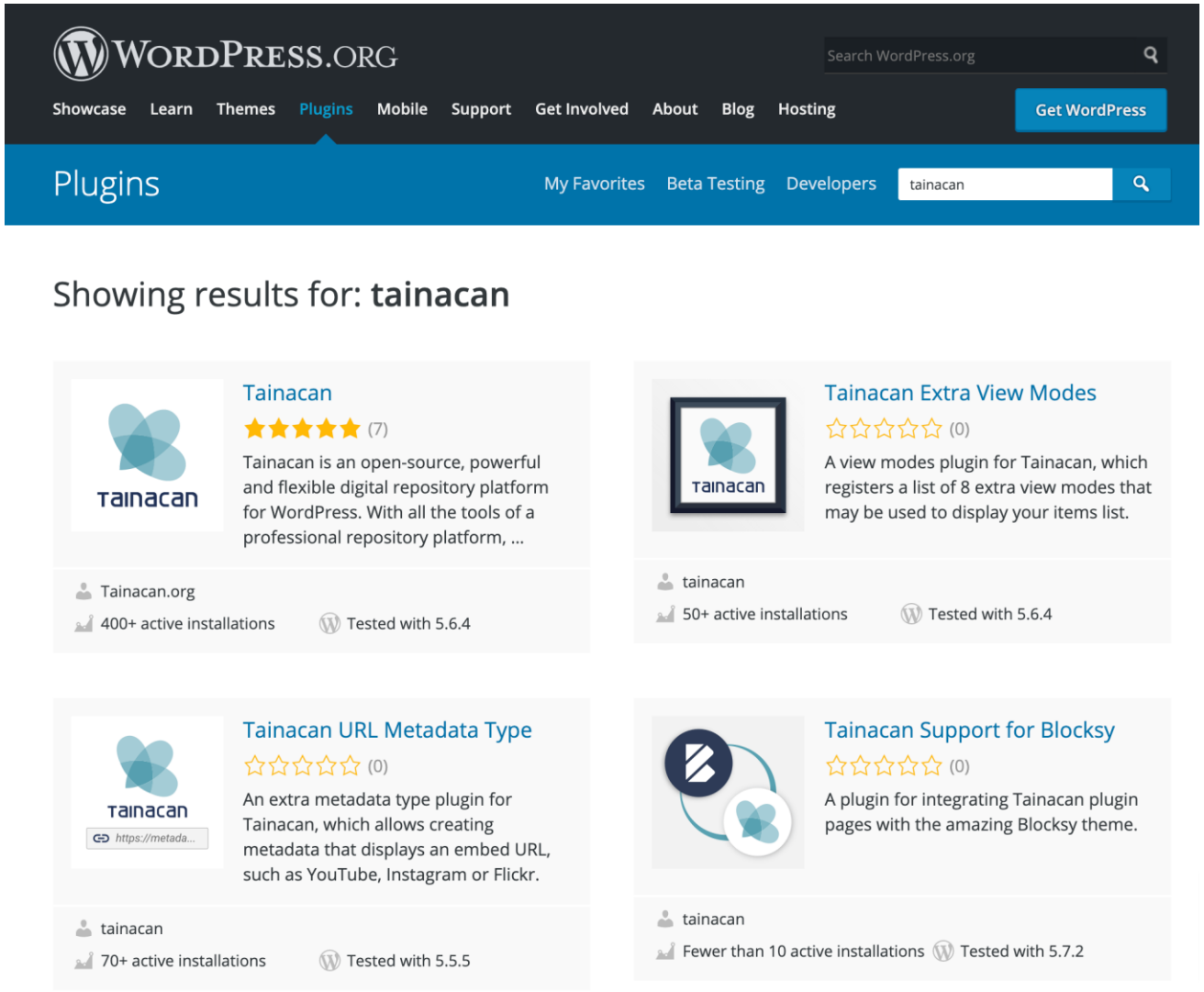
Research and development of **technology and policies for aggregation, search and retrieval of massive data** from distributed digital collections

Data Science and Machine Learning Processes for collecting, analyzing, processing, enriching, reconciling, generating metadata and loading data

Software for organizing, disseminating and managing digital collections: plugins and themes for WordPress

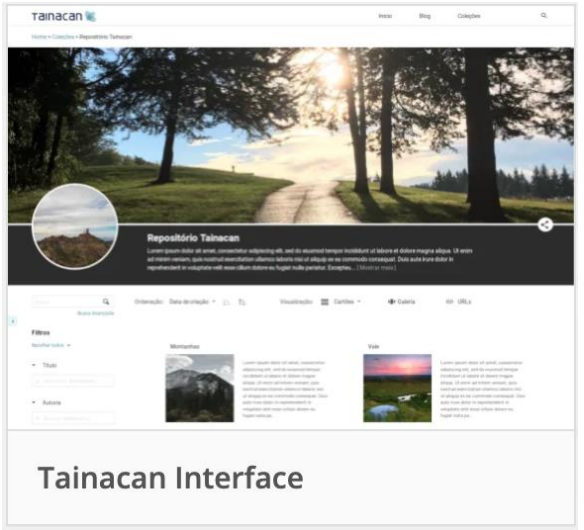
TAINACAN

Software for digital collections (i): plugins and themes for WordPress



4 plugins

https://wordpress.org/plugins/search/tainacan/

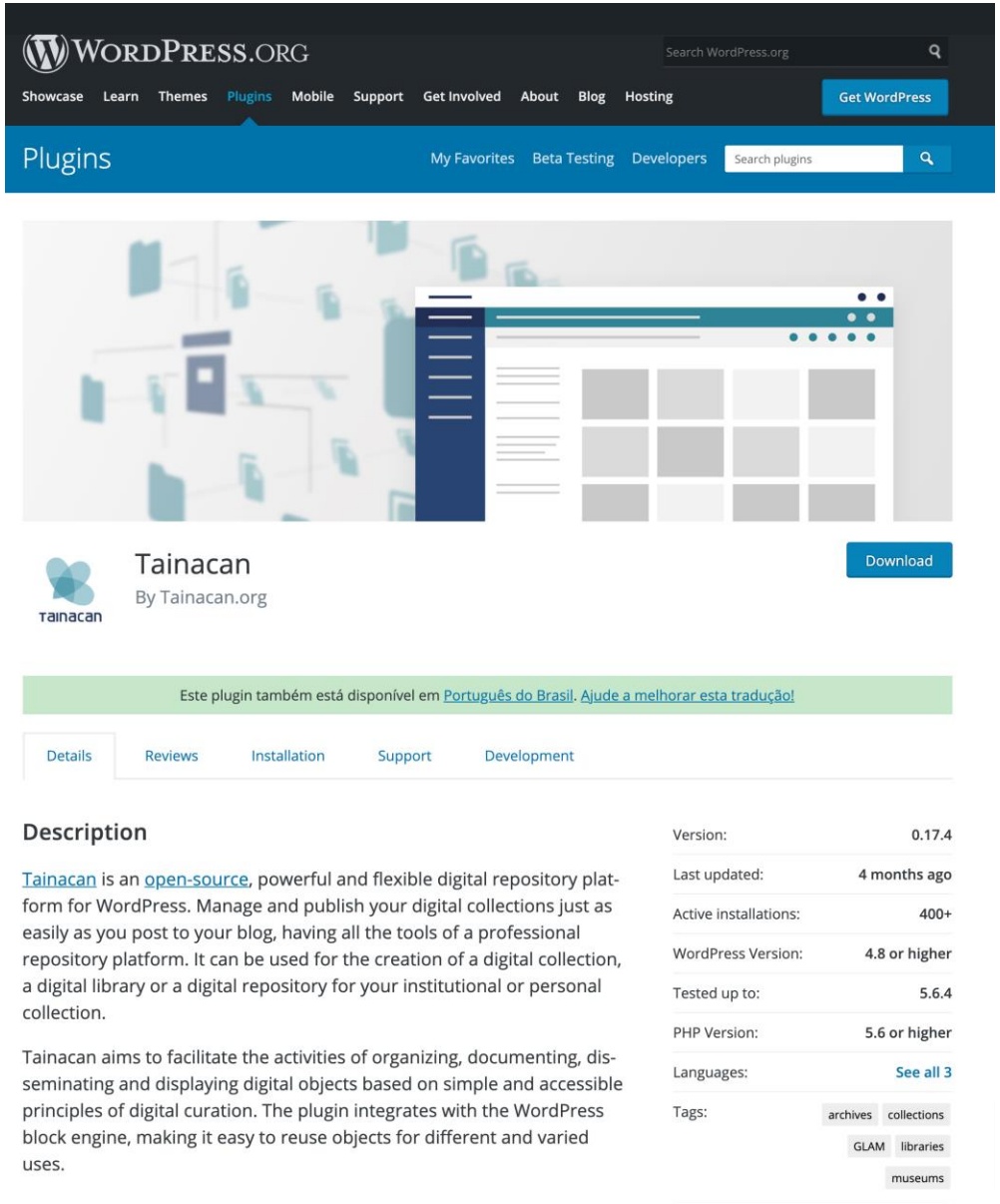


1 theme

https://wordpress.org/themes/tainacan-interface/

Software for digital collections (ii): Tainacan plugin

+ 600 active installations
+ 11.738 downloads



Note: data collected in November 25th, 2021

https://wordpress.org/plugins/tainacan/

Software for digital collections (iii): Tainacan plugin

https://wordpress.org/plugins/tainacan/

let's take a look in Tainacan...

Research and development in technologies and policies for massive data aggregation of digital collections

Data aggregation technologies and policies (i): systematic review of work processes

Received: 12 January 2021 | Revised: 5 April 2021 | Accepted: 9 May 2021
DOI: 10.1002/asi.24498

RESEARCH ARTICLE

JASIST WILEY

Workflow models for aggregating cultural heritage data on the web: A systematic literature review

Joyce Siqueira | **Dalton Lopes Martins**

University of Brasília, Brasília, Brazil

Correspondence
Joyce Siqueira, University of Brasília, University Campus Darcy Ribeiro, Brasília, DF, Brazil.
Email: joycitta@gmail.com

Funding information
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior; Universidade de Brasília

Abstract
In recent years, different cultural institutions have made efforts to spread culture through the construction of a unique search interface that integrates their digital objects and facilitates data retrieval for lay users. However, integrating cultural data is not a trivial task; therefore, this work performs a systematic literature review on data aggregation workflows, in order to answer five questions: What are the projects? What are the planned steps? Which technologies are used? Are the steps performed manually, automatically, or semi-automatically? Which perform semantic search? The searches were carried out in three databases: Networked Digital Library of Theses and Dissertations, Scopus and Web of Science. In Q01, 12 projects were selected. In Q02, 9 stages were identified: Harvesting, Ingestion, Mapping, Indexing, Storing, Monitoring, Enriching, Displaying, and Publishing LOD. In Q03, 19 different technologies were found it. In Q04, we identified that most of the solutions are semi-automatic and, in Q05, that most of them perform a semantic search. The analysis of the workflows allowed us to identify that there is no consensus regarding the stages, their nomenclatures, and technologies, besides presenting superficial discussions. But it allowed to identify the main steps for the implementation of the aggregation of cultural data.

1 | INTRODUCTION

Institutions responsible for the custody of cultural heritage collections in Brazil and especially abroad have invested in the digitalization and dissemination of their digital collections on the web. This movement has resulted in a large amount of available content, which brings challenges to the discovery of digital resources to deal with cultural heritage. This trend has made it essential to provide users with an efficient way to find digital objects, by offering integrated search interfaces. The international scenario presents us with several solutions for an integrated interface, Europeana being the best-known example. In Brazil, there is still no widely applied solution, as national initiatives are generally restricted to small projects in local institutions.

Although there are a variety of solutions, it is consensual that getting together cultural data brings additional difficulties, due to the diversity of types of digital objects. We can state that there is no simple solution, but conversely, there are very challenging software engineering and data modeling problems (Avazpour, Grundy, & Zhu, 2019).

To understand the data aggregation models of cultural collections proposed worldwide aiming at their customization and development for the Brazilian reality, we proposed a systematic literature review (SLR), with the objective of answering five research questions: What are the projects? What are the steps foreseen for data aggregation? What are technologies used? Are the steps performed manually, automatically, or semi-automatically? Which perform semantic search?

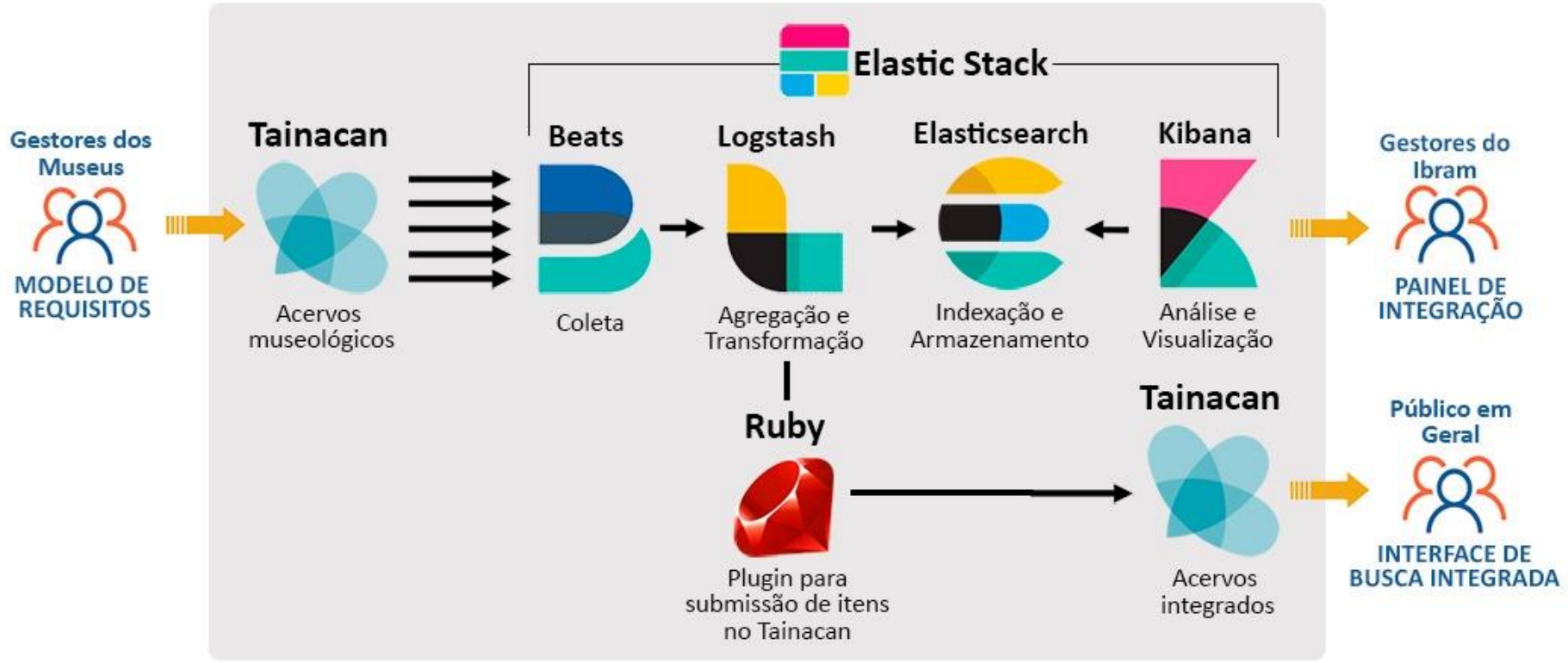
TABLE 5 Steps for data aggregation

No.	Step	Description
1	Harvesting	Extraction of data in its raw form. In general, in OAI-PMH format
2	Ingestion	Receive the data extracted in the collection
3	Mapping	Mapping metadata schemas, performing the transformation from the source scheme to the target scheme
4	Indexing	Metadata indexing service
5	Storing	Store the collected data
6	Monitoring	Interface for monitoring results for possible human interference
7	Enriching	Enrich the metadata through other existing data on the web
8	Displaying	Make the aggregated data available through API, which displays the data in RDF, OAI-PMH or JSON format
9	Publishing LOD	Publish on Linked Open Data

Source: authors, 2020.

https://asistdl.onlinelibrary.wiley.com/doi/10.1002/asi.24498

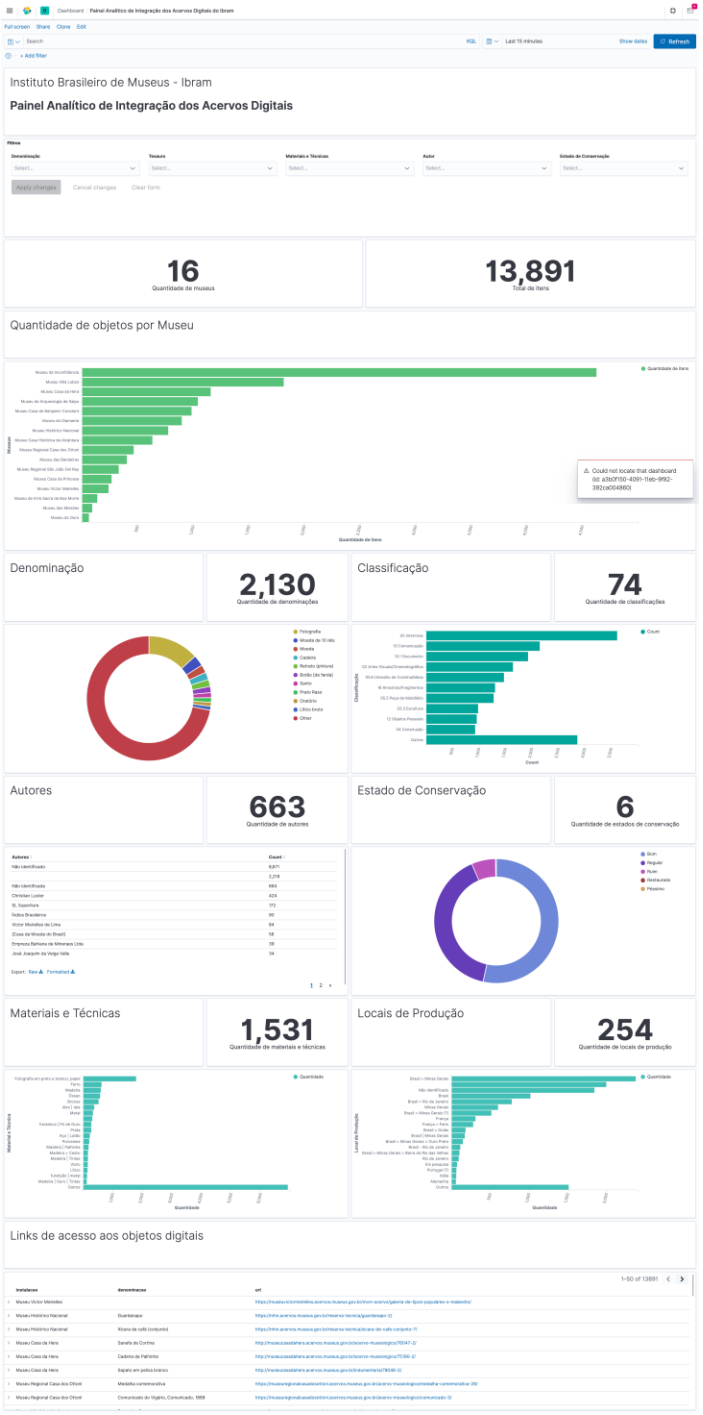
Data aggregation technologies and policies (ii): technology integration



https://pesquisa.tainacan.org/

Data aggregation technologies and policies (iii): analytical dashboard

kibana



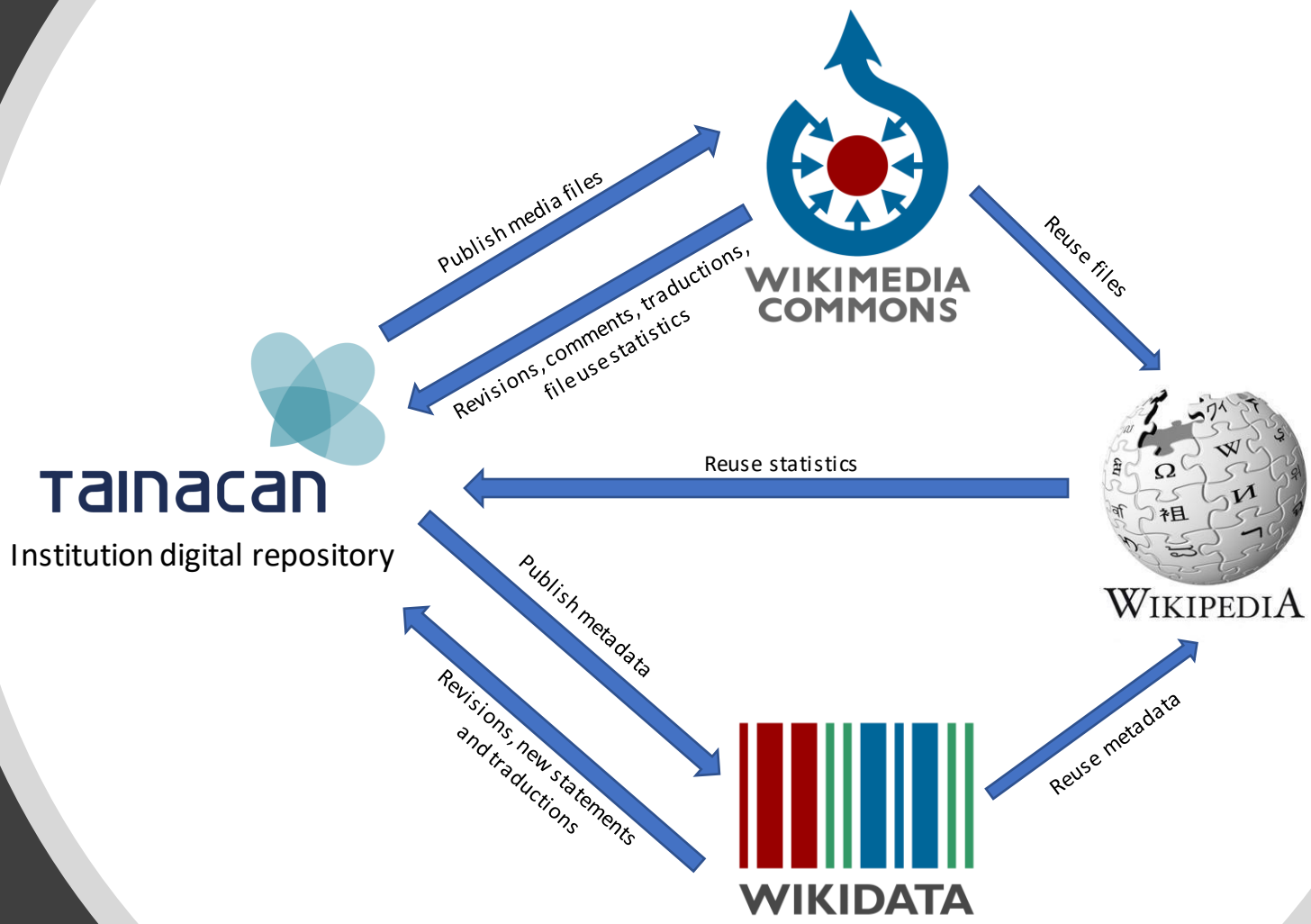
http://200.137.217.144:6601/goto/4b5ccbd1441d72b2f7886abdbcef1109

… and now…

The roundtripping !

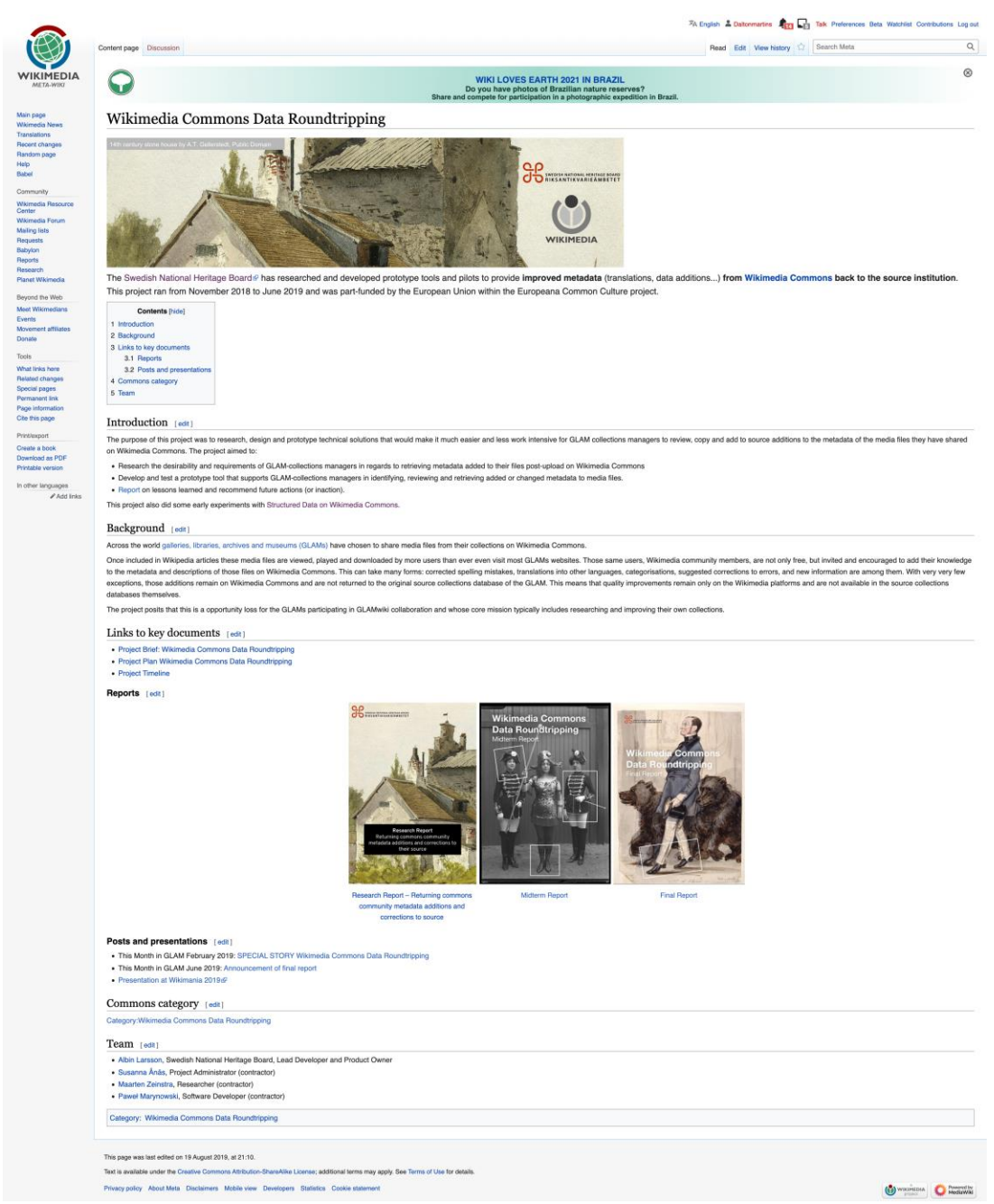
(in research…)

General vision



References

Roundtripping references (i)



Wikimedia Commons Data Roundtripping

WIKI LOVES EARTH 2021 IN BRAZIL
Do you have photos of Brazilian nature reserves?
Share and compete for participation in a photographic expedition in Brazil.

The Swedish National Heritage Board has researched and developed prototype tools and pilots to provide **improved metadata** (translations, data additions...) **from Wikimedia Commons back to the source institution.**
This project ran from November 2018 to June 2019 and was part-funded by the European Union within the Europeana Common Culture project.

Contents [hide]
1 Introduction
2 Background
3 Links to key documents
3.1 Reports
3.2 Posts and presentations
4 Commons category
5 Team

Introduction [edit]

The purpose of this project was to research, design and prototype technical solutions that would make it much easier and less work intensive for GLAM collections managers to review, copy and add to source additions to the metadata of the media files they have shared on Wikimedia Commons. The project aimed to:

- Research the desirability and requirements of GLAM-collections managers in regards to retrieving metadata added to their files post-upload on Wikimedia Commons
- Develop and test a prototype tool that supports GLAM-collections managers in identifying, reviewing and retrieving added or changed metadata to media files.
- Report on lessons learned and recommend future actions (or inaction).

This project also did some early experiments with Structured Data on Wikimedia Commons.

Background [edit]

Across the world galleries, libraries, archives and museums (GLAMs) have chosen to share media files from their collections on Wikimedia Commons.

Once included in Wikipedia articles these media files are viewed, played and downloaded by more users than ever even visit most GLAMs websites. Those same users, Wikimedia community members, are not only free, but invited and encouraged to add their knowledge to the metadata and descriptions of those files on Wikimedia Commons. This can take many forms: corrected spelling mistakes, translations into other languages, categorisations, suggested corrections to errors, and new information are among them. With very very few exceptions, those additions remain on Wikimedia Commons and are not returned to the original source collections database of the GLAM. This means that quality improvements remain only on the Wikimedia platforms and are not available in the source collections databases themselves.

The project posits that this is a opportunity loss for the GLAMs participating in GLAMwiki collaboration and whose core mission typically includes researching and improving their own collections.

Links to key documents [edit]

- Project Brief: Wikimedia Commons Data Roundtripping
- Project Plan Wikimedia Commons Data Roundtripping
- Project Timeline

Reports [edit]

Research Report – Returning commons community metadata additions and corrections to source | Midterm Report | Final Report

Posts and presentations [edit]

- This Month in GLAM February 2019: SPECIAL STORY Wikimedia Commons Data Roundtripping
- This Month in GLAM June 2019: Announcement of final report
- Presentation at Wikimania 2019

Commons category [edit]

Category:Wikimedia Commons Data Roundtripping

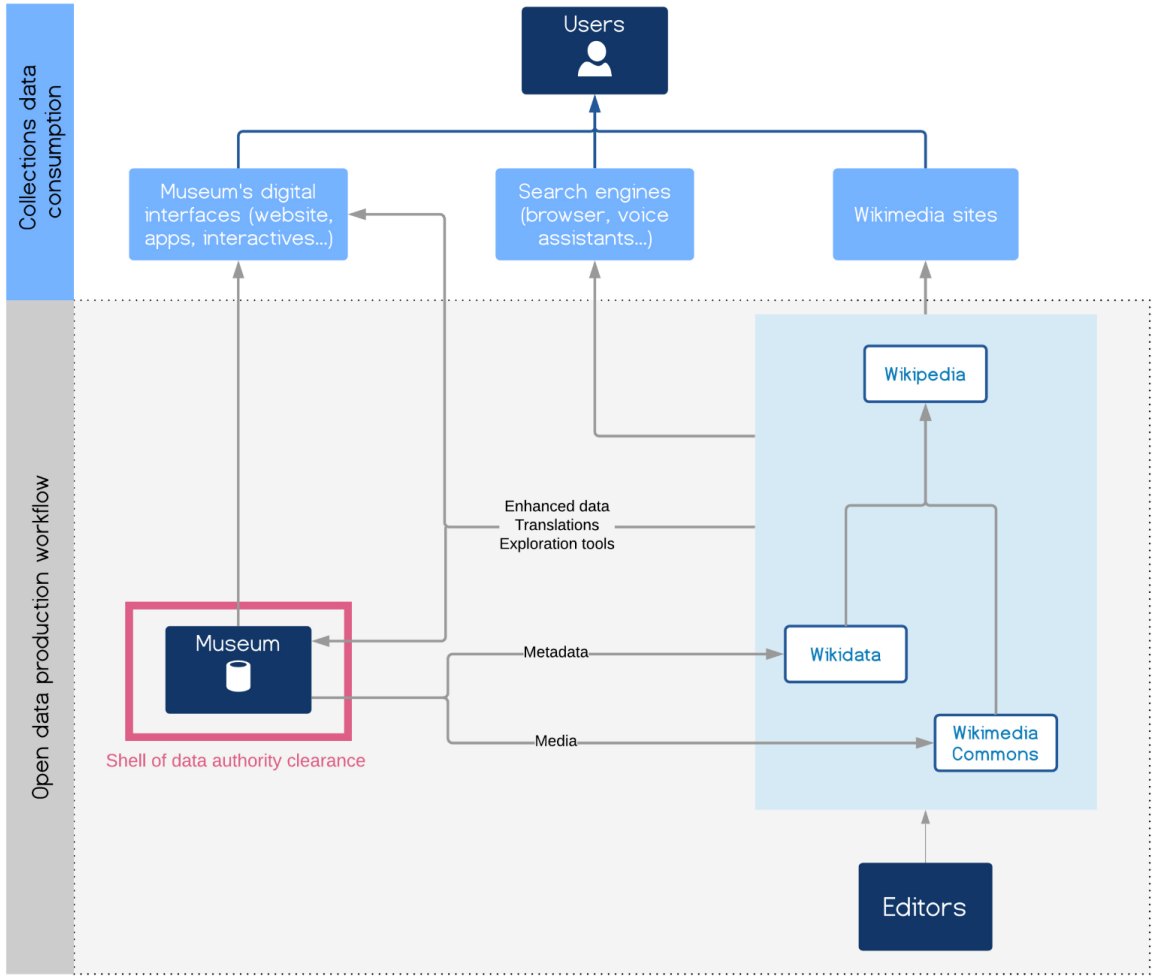
Team [edit]

- Albin Larsson, Swedish National Heritage Board, Lead Developer and Product Owner
- Susanna Ånäs, Project Administrator (contractor)
- Maarten Zeinstra, Researcher (contractor)
- Paweł Marynowski, Software Developer (contractor)

Category: Wikimedia Commons Data Roundtripping

https://meta.wikimedia.org/wiki/Wikimedia_Commons_Data_Roundtripping

Roundtripping references (ii)



MuseWeb About Attending Presenting Exhibiting Conference

Museum Collections on Wikipedia: Opening Up to Open Data Initiatives

Elena Villaespesa, Pratt Institute, USA, Trilce Navarrete, Erasmus University Rotterdam, The Netherlands

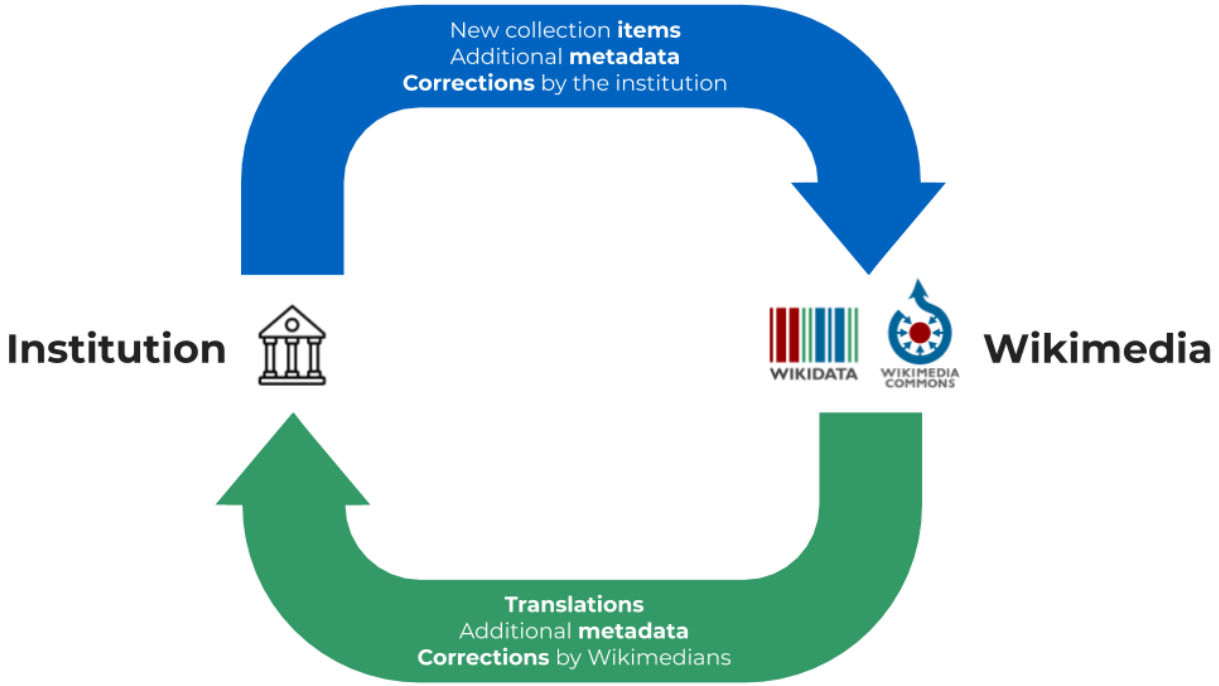
Abstract

The Web has become an important source of information, made possible by structured data. Open linked data enables ubiquitous presence as machines increasingly filter our views—via preferred search engines, the knowledge graph, or Siri—particularly of content found in Wikidata. In this paper, we identify paintings in Wikidata and analyze their usage in the English Wikipedia to find substantial impact. Our results provide evidence that publication of collections as open data facilitate an increase in views, enriched data, automatic translation, and magnified visibility. We find that the usage of paintings and views present a long-tail structure with an underrepresentation of contemporary paintings. Collaborations between museums and Wikimedia yield increased impact, yet projects are unsustainable. We propose an adjusted work-flow to accommodate for Wikimedia projects and amplify the impact of opening museum collections data.

Keywords: Wikipedia, Wikidata, paintings, linked open data, metrics, open access

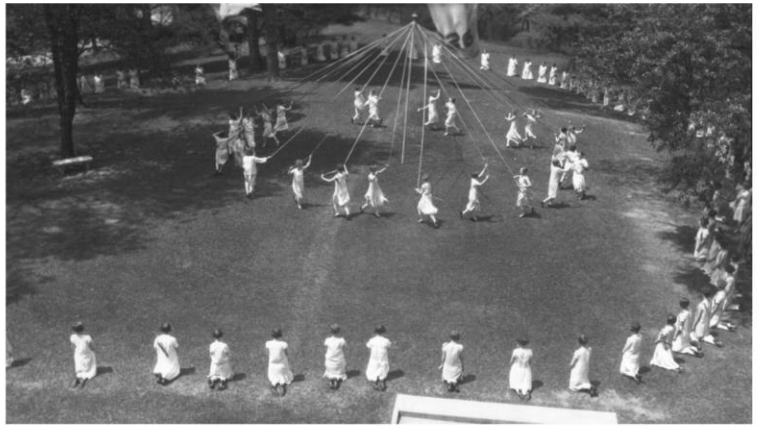
https://mw19.mwconf.org/paper/museum-collections-on-wikipedia-opening-up-to-open-data-initiatives/

Roundtripping references (iii)



Data Roundtripping: a new frontier for GLAM-Wiki collaborations

December 13, 2019 by Sandra Fauconnier



Dancers around the may pole, Oxford, Ohio, 1926. Photo by Frank R. Snyder; Miami University Libraries—Digital collections, no known copyright restrictions

For more than 10 years now, cultural institutions around the world have partnered with Wikimedians to make their collections more visible and to encourage re-use via Wikimedia platforms. Collaborations of this kind, GLAM-Wiki projects (with Galleries, Libraries, Archives and Museums), often use Wikipedia and Wikimedia Commons as platforms. Images of cultural collections are uploaded to Wikimedia's media repository Wikimedia Commons and are re-used as illustrations in Wikipedia articles.

For several years, a growing number of GLAM-Wiki partnerships also work with Wikidata, the free, multilingual knowledge base of the Wikimedia ecosystem. Cultural institutions and Wikimedians upload data about cultural collections to Wikidata: it provides an accessible way to publish collections data as Linked Open Data, and makes the collection data multilingual, re-usable and discoverable across the web. Since 2019, files on Wikimedia Commons can now also be described with multilingual structured data from Wikidata. This will make the (structured) data component of GLAM-Wiki collaborations even more prominent in the future.

https://diff.wikimedia.org/2019/12/13/data-roundtripping-a-new-frontier-for-glam-wiki-collaborations/

4 big problems/steps to solve....

4 big problems to solve

1
reconciliation
of metadata values

2
data publishing workflow:
creation of items, media files on Wikimedia Commons and metadata on wikidata

3
monitoring workflow of editions and collaborations

4
monitoring reuse data:
indicators and metrics

1
reconciliation of metadata values

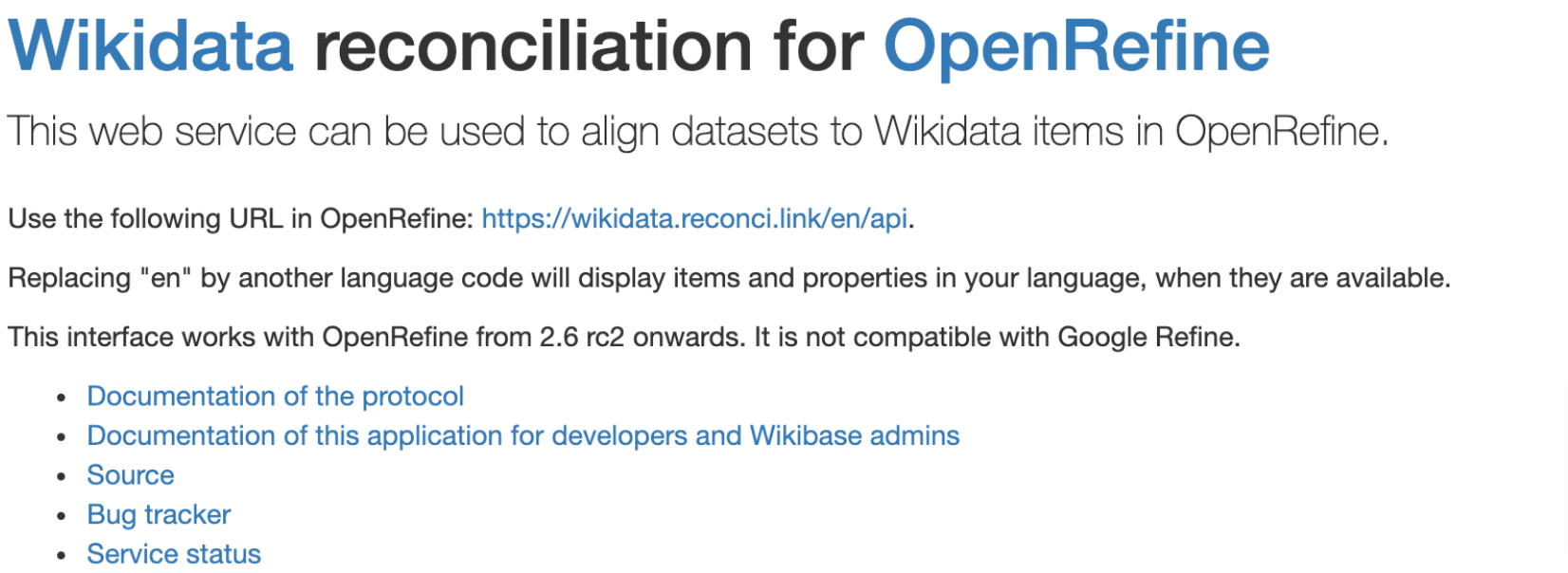
1.
reconciliation of metadata values

city	country
Oxford	GB
Paris	FR
Geneva	CH
Cambridge	GB
Cambridge	US
London	CA
London	GB

city	country
Oxford Oxford (100) Oxford (71) Oxford (71) Create new topic Search for match	GB
Paris Choose new match	FR
Geneva Choose new match	CH
Cambridge Choose new match	GB
Cambridge Cambridge (100) Cambridge (100) Cambridge (100) Cambridge (71) Cambridge (71) Create new topic Search for match	US

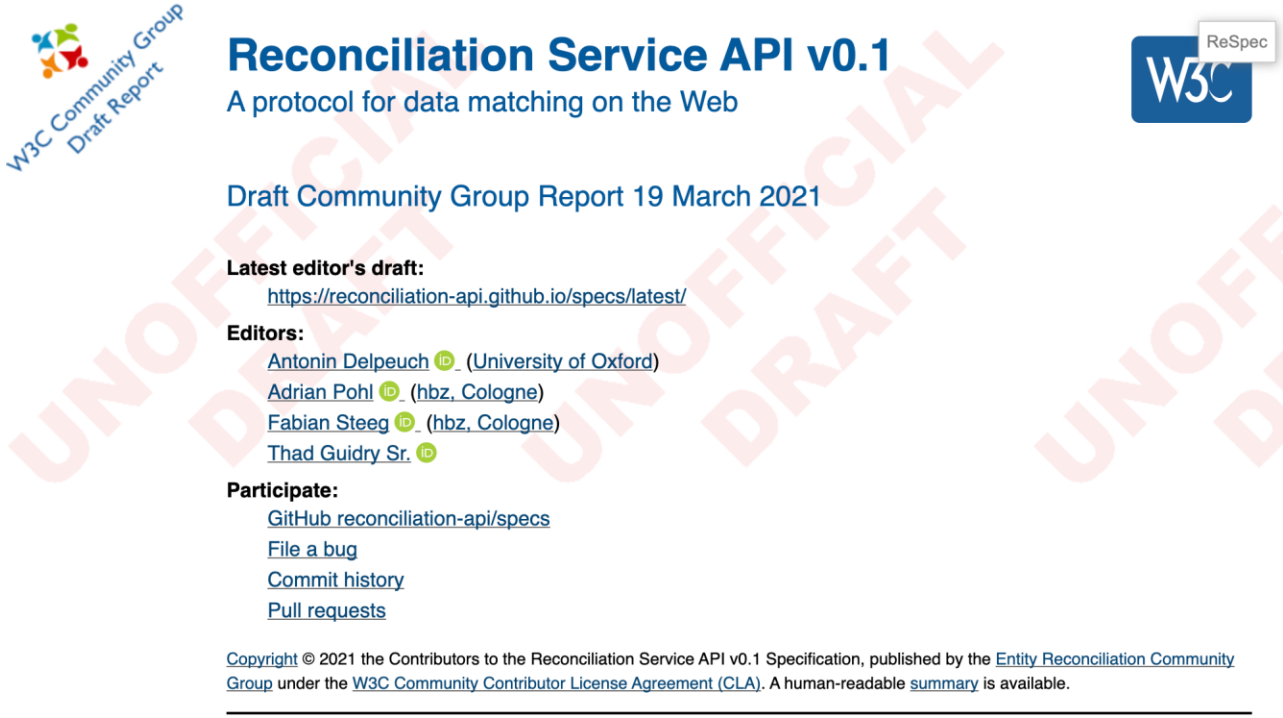
Source: https://wikidata.reconci.link/

1.
reconciliation of metadata values



https://wikidata.reconci.link/

1.
reconciliation of metadata values



https://reconciliation-api.github.io/specs/0.1/

2
data publishing workflow

2.
data
publishing: wikidata

português · Daltonmartins · Discussão · Preferências · Beta · Páginas vigiadas · Contribuições · Sair

WIKIDATA

Página do projeto · Discussão · Ler · Ver código-fonte · Ver histórico · Pesquisar na wiki Wikidata

Página principal
Portal comunitário
Esplanada
Criar um objeto novo
Mudanças recentes
Página aleatória
Query Service
Aqui perto
Random Primary Sources item
Ajuda
Donativos

Dados lexicográficos
Criar um lexema novo
Mudanças recentes
Random Lexeme

Ferramentas
Páginas afluentes
Alterações relacionadas
Páginas especiais
Hiperligação permanente
Informações da página
Elemento Wikidata

Noutras línguas
Adicionar hiperligações

WIKI LOVES EARTH 2021 NO BRASIL
Tem fotos de reservas naturais brasileiras ou de seu seres?
Compartilhe conosco e faça parte desse movimento pela natureza!

Wikidata:Data access

Traduzir esta página

Outras línguas: Bahasa Indonesia · Bahasa Melayu · British English · Deitsch · Deutsch · **English** · Esperanto · Nederlands · azərbaycanca · català · dansk · español · euskara · français · français cadien · italiano · polski · português do Brasil · română · suomi · svenska · čeština · Ελληνικά · русский · српски / srpski · українська · Հայերեն · اردو · العربية · بهاس ملايو · فارسی · پښتو · हिन्दी · বাংলা · ไทย · 中文 · 日本語 · ᏣᎳᎩ · 한국어

This page is a starting point for obtaining data from Wikidata. For methods that can be used inside Wikimedia projects, please see the page about how to use data on Wikimedia projects.

Índice [esconder]

1 Basic important things to know
2 How can I get data out of Wikidata?
  2.1 Per-item access to data
    2.1.1 Linked Data interface
    2.1.2 MediaWiki API
    2.1.3 SPARQL endpoints
    2.1.4 Bots
  2.2 Access to dumps
  2.3 Incremental updates and event streams
3 Best practices to follow
4 Examples and showcases
5 See also

MediaWiki API

See the documentation of the API.

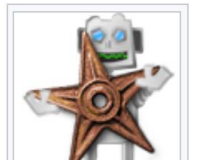
Caution: Some API modules, in particular those accessed via action=query, will return raw page content. For entity pages, that raw page content is *not* guaranteed to use any documented format or follow any standard structure. Raw page content should be treated as an opaque blob. For access to the canonical JSON form of entity pages, use the wbgetentities and wbsearchentities modules.

SPARQL endpoints

You can query the data in Wikidata through our SPARQL endpoint, the Wikidata Query Service. The service can be used both as an interactive web interface, or programmatically by submitting `GET` or `POST` requests to `https://query.wikidata.org/sparql`. RDF data can alternatively be accesses via an Linked Data Fragments[1] interface at `https://query.wikidata.org/bigdata/ldf`. See the user manual and local community pages for more information.

Bots

You can also access the API by using a bot. See Wikidados:Robôs for more on bots.

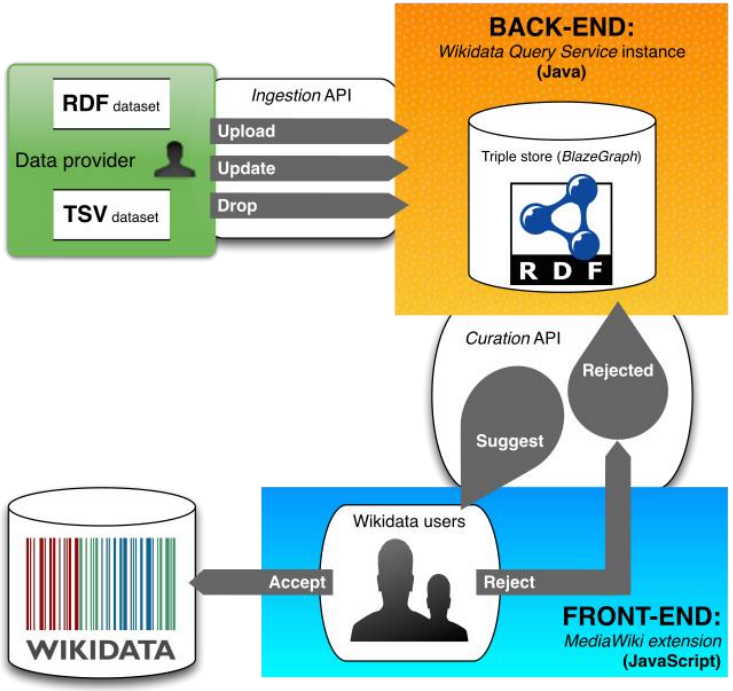


Access to dumps

You can download dumps of the whole content of Wikidata. *See the database dumps documentation.*

https://www.wikidata.org/wiki/Wikidata:Data_access

2.
data
publishing: wikidata



Back-end implementation [editar]

Data format [editar]

The tool currently accepts datasets serialized in QuickStatements (Q20084080). While it is indeed a very compact format, useful to upload large datasets, it is totally non-standard: the only available documentation is contained in the QuickStatements service page itself.[20] Hence, we foresee the support of stable formats for both the self-sustainability of the project and a standardized data donation workflow. Still, we will keep the QuickStatements support.

Datasets from third-party providers should be serialized in RDF and follow the Wikidata RDF data model.[21] We believe this is the most standard way for 2 reasons:

1. RDF is a mature Web standard, being a W3C recommendation since 1999;[22]
2. The Wikidata RDF export format is claimed to be stable.[23]

Main component [editar]

Given these premises, a *Wikidata Query Service*[24] instance is a good fit for the back end, since it:

- uses a RDF triple store, i.e., Blazegraph as the storage engine;[25]
- is claimed to be a stable Wikidata public API;[26]
- is written in **Java**, probably a more adopted programming language compared to the current implementation in C++;
- has facilities to upload datasets in Wikidata RDF dump format;[27]
- exposes APIs to access data via SPARQL, specifically useful for both the domain filter and the query text box features.[28]

The main tool will support full statements, while the filter-based tool should be fed with truthy statements.

Ingestion API [editar]

The Ingestion API is responsible for the interaction with third-party data providers. Incoming datasets are first **validated** against the Wikidata RDF data model. It will then provide the following facilities for datasets:

- upload;
- update;
- drop.

Curation API [editar]

The Curation API is responsible for the interaction with Wikidata users, with 2 main services. It will suggest claims for addition and flag the rejected suggestions in the back-end storage.

https://www.wikidata.org/wiki/Wikidata:Primary_sources_tool

2.
data
publishing: wikidata

3. Work with the Wikidata community to import the data

There are several ways to add data to Wikidata including

Manual data entry

Everyone can add data to Wikidata manually.

Online tools

There are a number of online tools to help with the import of data into Wikidata. Some of them that support specific workflows for data imports are:

- Mix'n'match contains lists of important concepts from reliable sources and allows to match the names to Wikidata entries with one click. It is possible to get your list included. Read the blogpost about the motivation behind Mix'n'match.
- The primary sources tool allows for a curation workflow for data donations to Wikidata, where Wikidata editors can review, edit, or reject data offered to the community. It was initially developed for datasets from Freebase, but can be used for any collection of very large non-curated datasets.
- QuickStatements 2 (Q29032512): allows users to create items and upload lists of statements based on input in tab-separated format exported from spreadsheets
- fatameh allows users to create fully populated items about scientific papers with one click.

Wikidata API

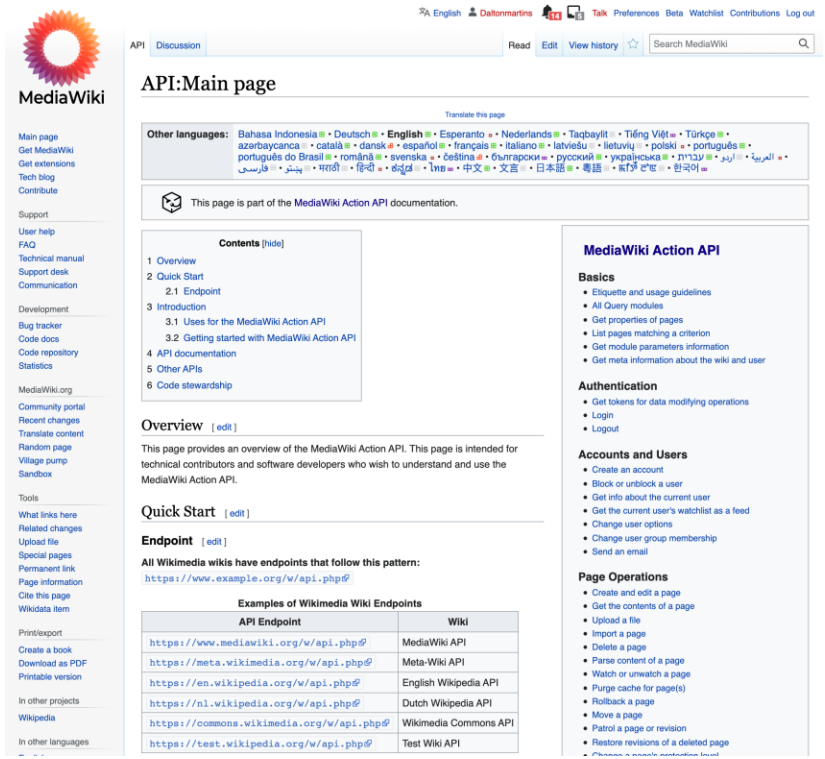
The Wikidata API is a web service that provides convenient access to wiki features, data, and meta-data over HTTP.

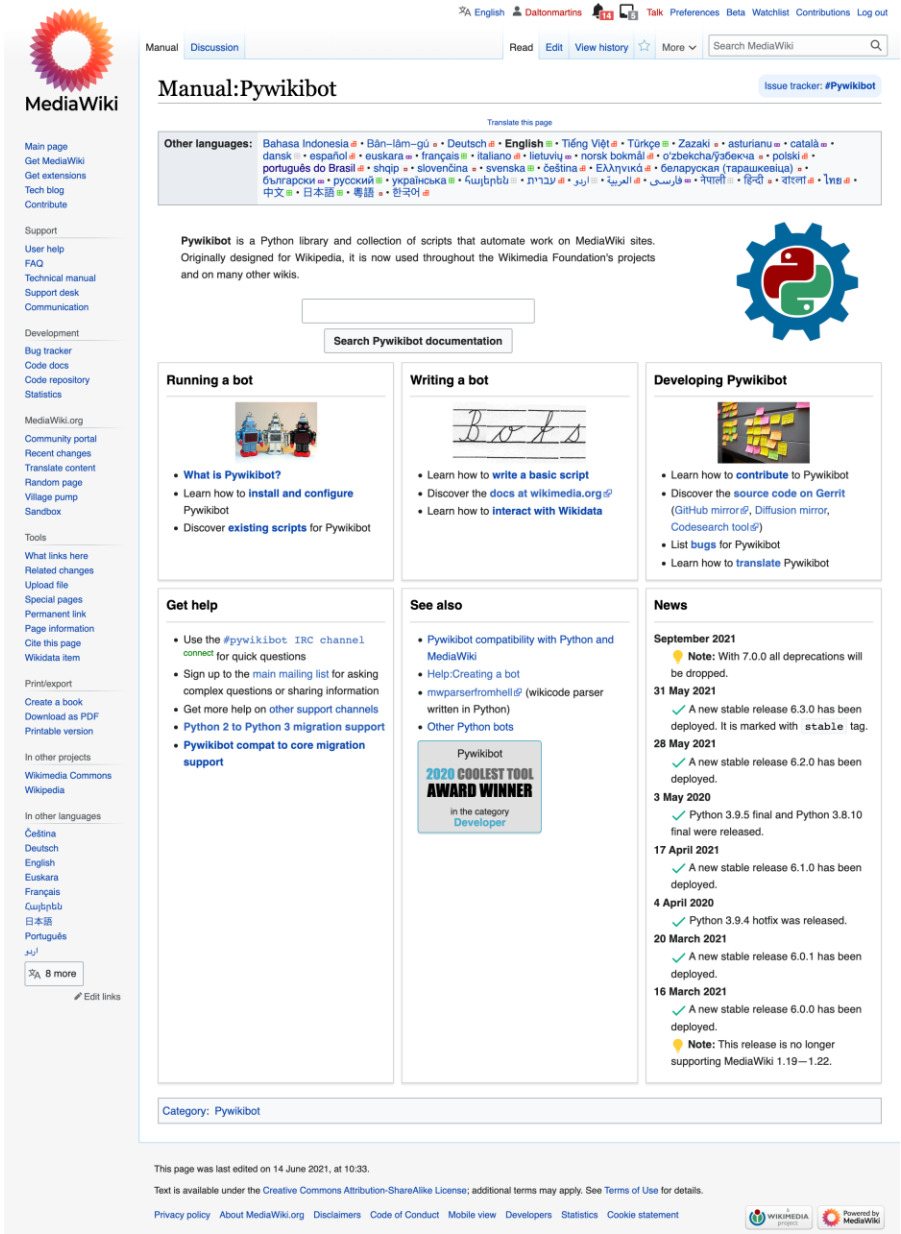
Bots

Bots (also known as robots) are tools used to make edits without the necessity of human decision-making. Bots on Wikidata can add interwiki links, labels, descriptions, statements, references, and can even create items, among other things. We also collect hints and inspiration for your own code to import data with a bot.

https://www.wikidata.org/wiki/Wikidata:Data_donation

2.
data publishing:commons



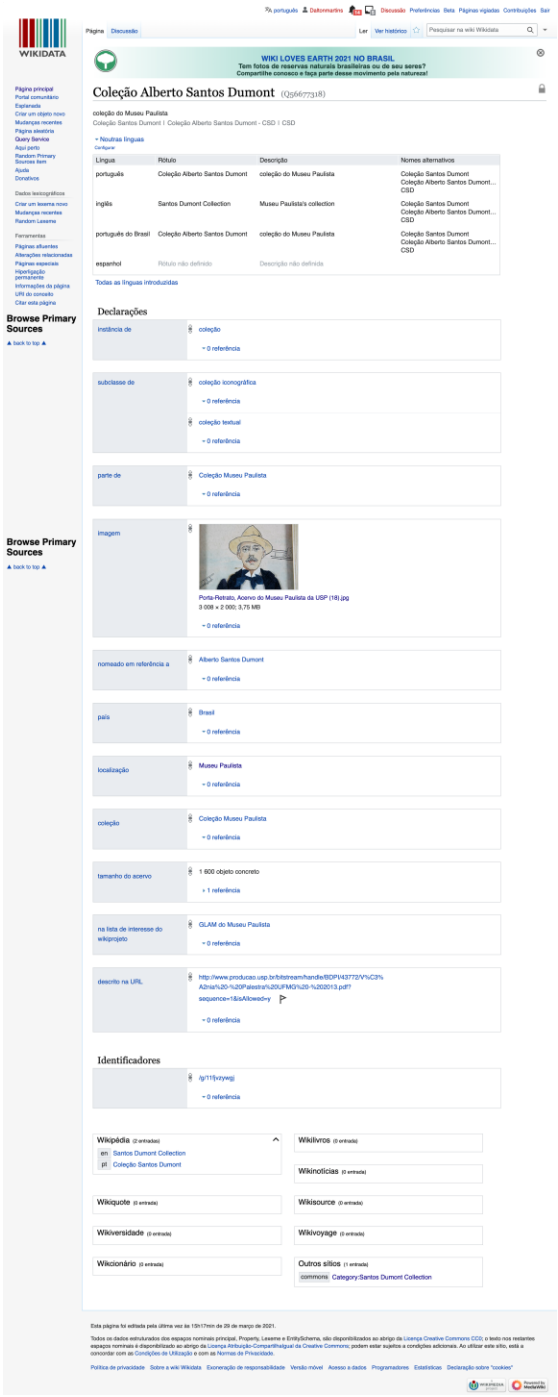


https://www.mediawiki.org/wiki/API:Main_page

https://www.mediawiki.org/wiki/Manual:Pywikibot

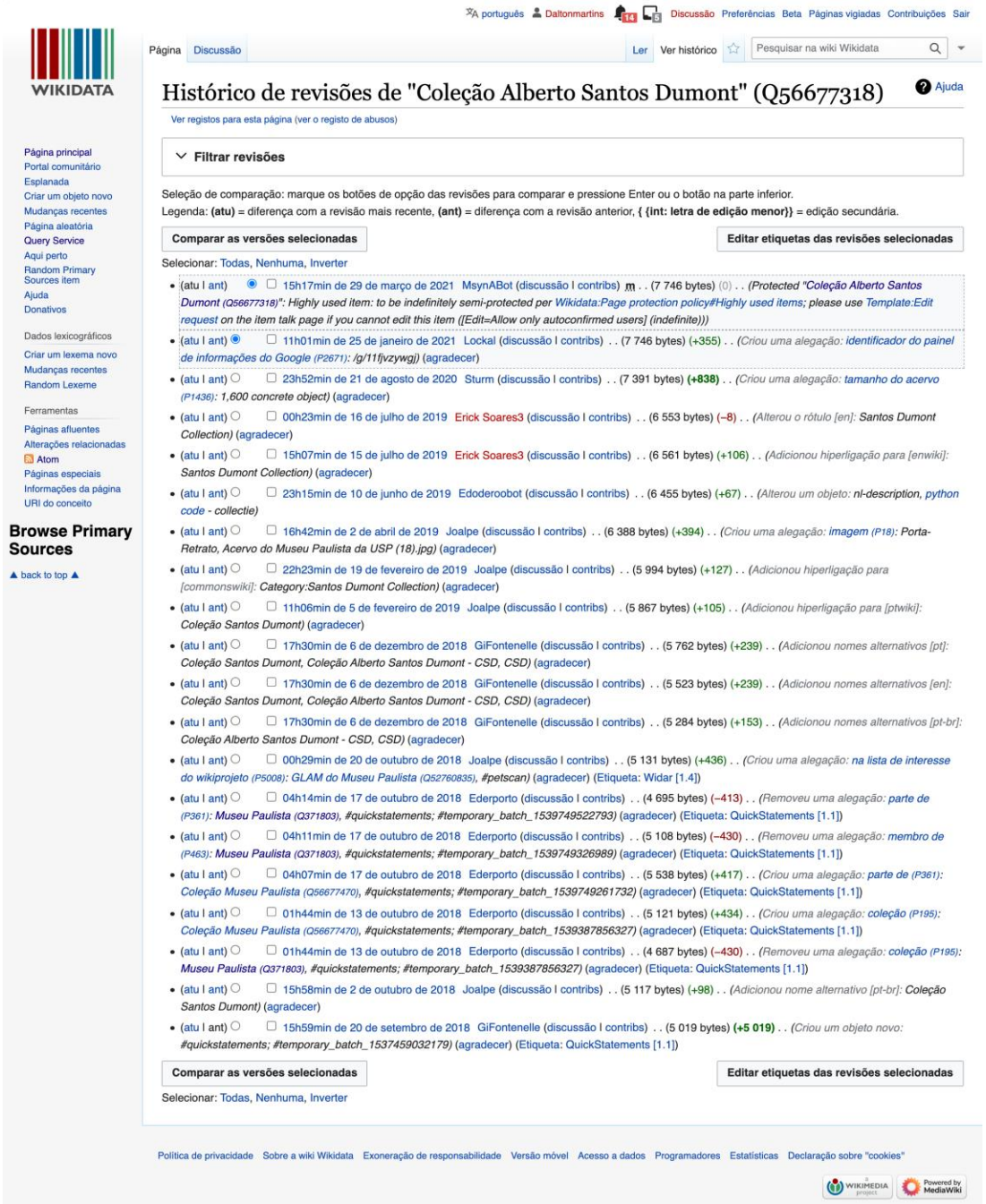
3
monitoring workflow of editions and collaborations (examples...)

3.
monitoring workflow: wikidata



https://www.wikidata.org/wiki/Q56677318

3.
monitoring workflow: wikidata



https://www.wikidata.org/wiki/Q56677318

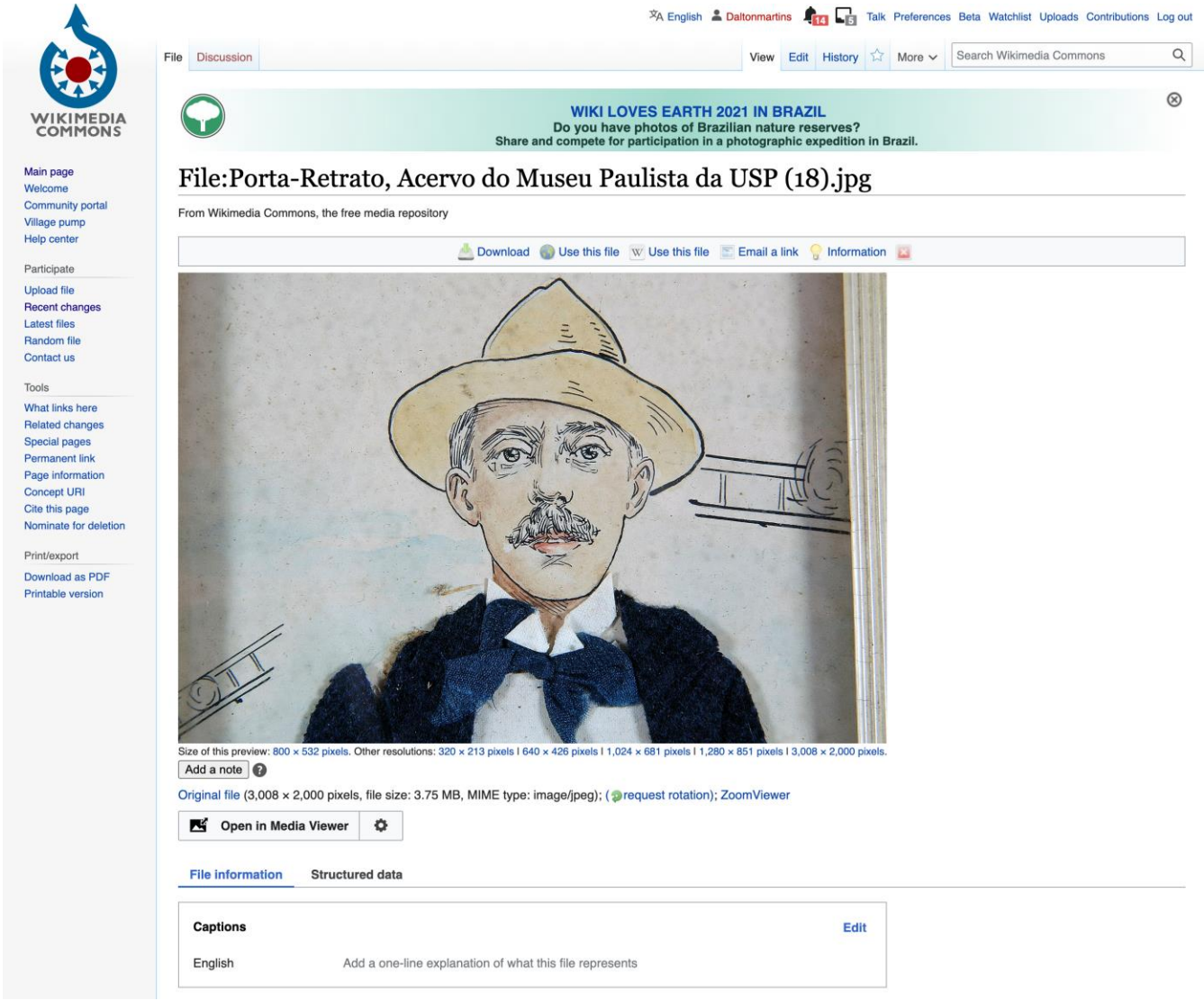
3.
monitoring workflow: wikidata

This XML file does not appear to have any style information associated with it. The document tree is shown below.


```
<feed xmlns="http://www.w3.org/2005/Atom" xml:lang="en">
  <id>https://www.wikidata.org/w/index.php?title=Q56677318&feed=atom&action=history</id>
  <title>Q56677318 - Revision history</title>
  <link rel="self" type="application/atom+xml" href="https://www.wikidata.org/w/index.php?title=Q56677318&feed=atom&action=history"/>
  <link rel="alternate" type="text/html" href="https://www.wikidata.org/w/index.php?title=Q56677318&action=history"/>
  <updated>2021-06-21T18:52:44Z</updated>
  <subtitle>Revision history for this page on the wiki</subtitle>
  <generator>MediaWiki 1.37.0-wmf.9</generator>
  <entry>
    <id>https://www.wikidata.org/w/index.php?title=Q56677318&diff=1392325998&oldid=prev</id>
    <title>MsynABot: Protected "Q56677318": Highly used item: to be indefinitely semi-protected per Wikidata:Page protection policy#Highly used items; please use Template:Edit request on the item talk page if you cannot edit this item ([Edit=Allow only autoconfirmed users] (indefinite))</title>
    <link rel="alternate" type="text/html" href="https://www.wikidata.org/w/index.php?title=Q56677318&diff=1392325998&oldid=prev"/>
    <updated>2021-03-29T15:17:16Z</updated>
    <summary type="html"><p>Protected &amp;quot;<a href="/wiki/Q56677318" title="Coleção Alberto Santos Dumont | coleção do Museu Paulista"><span class="wb-itemlink"><span class="wb-itemlink-label" lang="pt" dir="ltr">Coleção Alberto Santos Dumont</span> <span class="wb-itemlink-id">(Q56677318)</span></span></a>&amp;quot;: Highly used item: to be indefinitely semi-protected per <a href="/wiki/Wikidata:Page_protection_policy#Highly_used_items" class="mw-redirect" title="Wikidata:Page protection policy">Wikidata:Page protection policy#Highly used items</a>; please use <a href="/wiki/Template:Edit_request" title="Template:Edit request">Template:Edit request</a> on the item talk page if you cannot edit this item ([Edit=Allow only autoconfirmed users] (indefinite))</p> <table style="background-color: #fff; color: #202122;" data-mw="interface"> <col class="diff-marker" /> <col class="diff-content" /> <col class="diff-marker" /> <col class="diff-content" /> <tr class="diff-title" lang="pt"> <td colspan="2" style="background-color: #fff; color: #202122; text-align: center;">← Revisão anterior</td> <td colspan="2" style="background-color: #fff; color: #202122; text-align: center;">Revisão das 15h17min de 29 de março de 2021</td> </tr> <!-- diff cache key wikidatawiki:diff:wikidiff2:1.12:old-1348053725:rev-1392325998:1.10.0:lang-pt:lang-pt --> </table></summary>
    <author>
      <name>MsynABot</name>
    </author>
  </entry>
  <entry>
    <id>https://www.wikidata.org/w/index.php?title=Q56677318&diff=1348053725&oldid=prev</id>
    <title>Lockal: /* wbcreateclaim-create:1| */ Property:P2671: /g/11fjvzywgj</title>
    <link rel="alternate" type="text/html" href="https://www.wikidata.org/w/index.php?title=Q56677318&diff=1348053725&oldid=prev"/>
    <updated>2021-01-25T11:01:17Z</updated>
    <summary type="html"><p><span dir="auto"><span class="autocomment">Criou uma alegação: </span></span> <a href="/wiki/Property:P2671" title="identificador do painel de informações do Google | identificador para a API do painel de informações do Google"><span class="wb-itemlink"><span class="wb-itemlink-label" lang="pt" dir="ltr">identificador do painel de informações do Google</span> <span class="wb-itemlink-id">(P2671)</span></span></a>: /g/11fjvzywgj</p> <table style="background-color: #fff; color: #202122;" data-mw="interface"> <col class="diff-marker" /> <col class="diff-content" /> <col class="diff-marker" /> <col class="diff-content" /> <tr class="diff-title" lang="pt"> <td colspan="2" style="background-color: #fff; color: #202122; text-align: center;">← Revisão anterior</td> <td colspan="2" style="background-color: #fff; color: #202122; text-align: center;">Revisão das 11h01min de 25 de janeiro de 2021</td> </tr><tr><td colspan="2" class="diff-lineno"></td><td colspan="2" class="diff-lineno">Propriedade / <a title="Property:P2671" href="/wiki/Property:P2671">identificador do painel de informações do Google</a></td></tr><tr><td colspan="2"> </td><td class="diff-marker" data-marker="+"></td><td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em; border-color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"><div><ins style="font-weight: bold; text-decoration: none;"><span><a class="wb-external-id external" href="https://www.google.com/search?kgmid=/g/11fjvzywgj" rel="nofollow">/g/11fjvzywgj</a></span></ins></div></td></tr><tr><td colspan="2" class="diff-lineno"></td><td colspan="2" class="diff-lineno">Propriedade / <a title="Property:P2671" href="/wiki/Property:P2671">identificador do painel de informações do Google</a>: <a class="wb-external-id external" href="https://www.google.com/search?kgmid=/g/11fjvzywgj" rel="nofollow">/g/11fjvzywgj</a> / classificação</td></tr><tr><td colspan="2"> </td><td class="diff-marker" data-marker="+"></td><td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em; border-color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"><div><ins style="font-weight: bold; text-decoration: none;"><span>Classificação normal</span></ins></div></td></tr> <!-- diff cache key wikidatawiki:diff:wikidiff2:1.12:old-1262668816:rev-1348053725:1.10.0:lang-pt:lang-pt --> </table></summary>
    <author>
      <name>Lockal</name>
    </author>
  </entry>
  <entry>
    <id>https://www.wikidata.org/w/index.php?title=Q56677318&diff=1262668816&oldid=prev</id>
    <title>Sturm: /* wbsetclaim-create:2||1 */ Property:P1436: 1,600 concrete object</title>
    <link rel="alternate" type="text/html" href="https://www.wikidata.org/w/index.php?title=Q56677318&diff=1262668816&oldid=prev"/>
    <updated>2020-08-21T23:52:57Z</updated>
    <summary type="html"><p><span dir="auto"><span class="autocomment">Criou uma alegação: </span></span> <a href="/wiki/Property:P1436" title="tamanho do acervo | número de itens em uma coleção ou exposição"><span class="wb-itemlink"><span class="wb-itemlink-label" lang="pt" dir="ltr">tamanho do acervo</span> <span class="wb-itemlink-id">(P1436)</span></span></a>: 1,600 concrete object</p> <table style="background-color: #fff; color: #202122;" data-mw="interface"> <col class="diff-marker" /> <col class="diff-content" /> <col class="diff-marker" /> <col class="diff-content" /> <tr class="diff-title" lang="pt"> <td colspan="2" style="background-color: #fff; color: #202122; text-align: center;">← Revisão anterior</td> <td colspan="2" style="background-color: #fff; color: #202122; text-align: center;">Revisão das 23h52min de 21 de agosto de 2020</td> </tr><tr><td colspan="2" class="diff-lineno"></td><td colspan="2" class="diff-lineno">Propriedade / <a title="Property:P1436" href="/wiki/Property:P1436">tamanho do acervo</a></td></tr><tr><td colspan="2"> </td><td class="diff-marker" data-marker="+"></td><td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em; border-color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"><div><ins style="font-weight: bold; text-decoration: none;"><span><h4 class="wb-details wb-quantity-details wb-quantity-rendered">1 600 objeto concreto</h4><table class="wb-details
```


https://www.wikidata.org/w/index.php?title=Q56677318&feed=atom&action=history

3.
monitoring workflow: Wikimedia Commons



https://commons.wikimedia.org/wiki/File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg

3.
monitoring workflow: Wikimedia Commons

Revision history of "File:Porta-Retrato, Acervo do Museu Paulista da USP (18).jpg" Help

View logs for this page (view abuse log)

Filter revisions

Old versions of this media file (Help):

- (cur) = difference with current version, (prev) = difference with preceding version
- time and date = article as of that timepoint, username or IP address of the editor, **m** = minor edit, → = section edit, ← = automatic edit summary
- Mark the radio boxes of the versions to compare and hit enter or the button at the bottom
- Number of watchers · Pageviews Analysis · Page statistics

Compare selected revisions

- (cur | prev) ◉ 22:46, 14 September 2020 BotMultichill (talk | contribs) . . (3,450 bytes) **(+1,306)** . . *(Changed an entity: Adding structured data: camera & copyright)* (undo)
- (cur | prev) ◉ 15:58, 6 July 2020 JarektBot (talk | contribs) . . (2,144 bytes) (+436) . . *(Created claim: digital representation of (P6243): Porta-Retrato (Q61766152), batch #38228)* (undo) *(Tag: quickstatements [2.0])*
- (cur | prev) ○ 06:54, 4 May 2020 JarektBot (talk | contribs) . . (1,708 bytes) (+485) . . *(Created claim: Wikimedia OTRS ticket number (P6305): 2017080710013454, batch #33446)* (undo) *(Tag: QuickStatements [1.5])*
- (cur | prev) ○ 13:17, 5 March 2020 Chatsam (talk | contribs) **m** . . (1,223 bytes) (–33) . . *(removed Category:Heraldic supporters)* (undo | thank) *(Tag: HotCat)*
- (cur | prev) ○ 15:50, 13 April 2019 Wieralee (talk | contribs) **m** . . (1,256 bytes) (+11) . . *(Moving from Category:Supports to Category:Heraldic supporters)* (undo | thank) *(Tag: Cat-a-lot)*
- (cur | prev) ○ 16:38, 2 April 2019 GiFontenelle (talk | contribs) . . (1,245 bytes) **(+1,245)** . . *(pattypan 18.02)* (thank)

Compare selected revisions

https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&action=history

3.
monitoring workflow: Wikimedia Commons

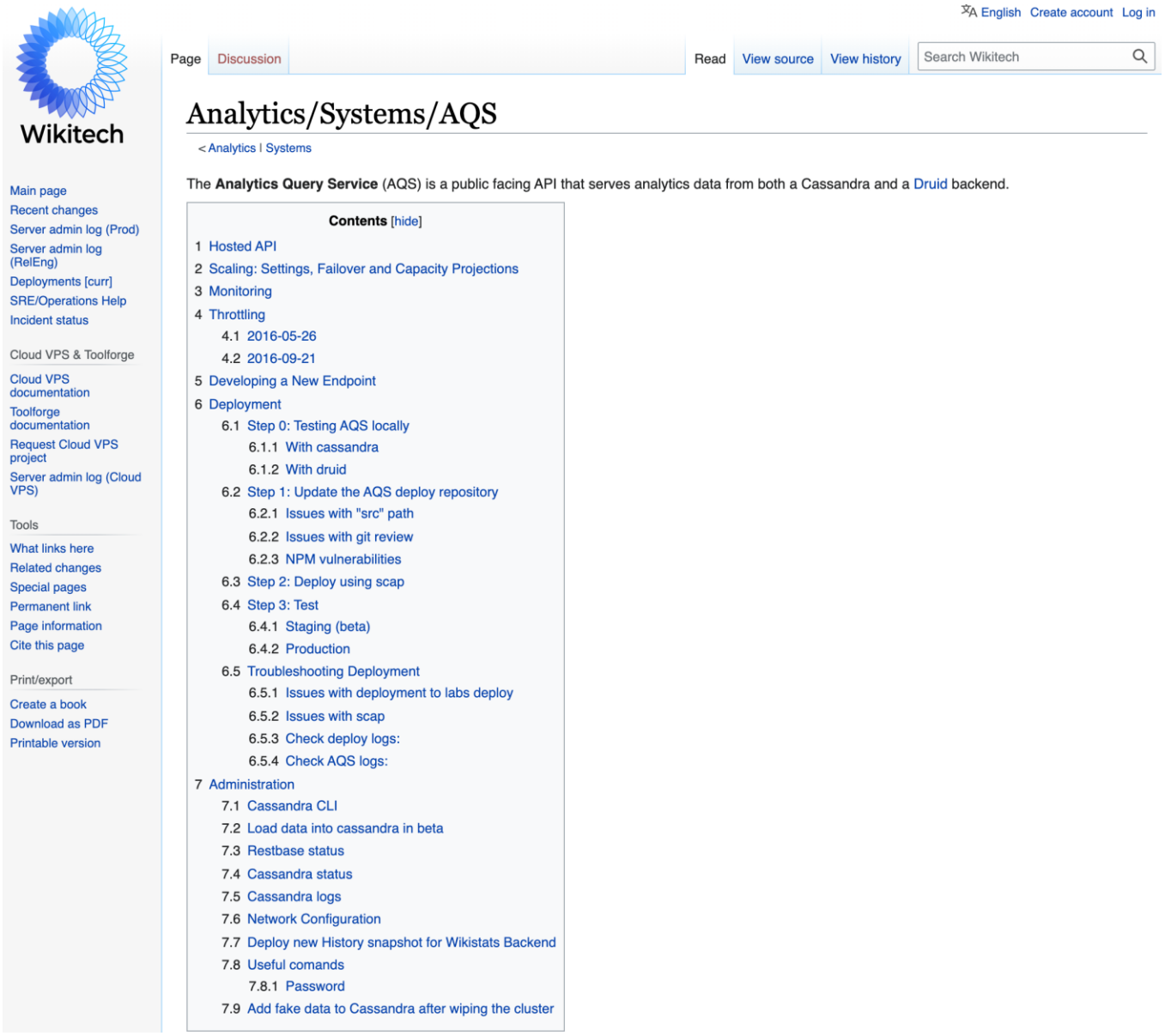
This XML file does not appear to have any style information associated with it. The document tree is shown below.


```
<feed xmlns="http://www.w3.org/2005/Atom" xml:lang="en">
  <id>https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&feed=atom&action=history</id>
  <title>File:Porta-Retrato, Acervo do Museu Paulista da USP (18).jpg - Revision history</title>
  <link rel="self" type="application/atom+xml" href="https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&feed=atom&action=history"/>
  <link rel="alternate" type="text/html" href="https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&action=history"/>
  <updated>2021-06-21T20:21:54Z</updated>
  <subtitle>Revision history for this page on the wiki</subtitle>
  <generator>MediaWiki 1.37.0-wmf.9</generator>
  <entry>
    <id>https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&diff=459452504&oldid=prev</id>
    <title>BotMultichill: /* wbeditentity-update:0| */ Adding structured data: camera & copyright</title>
    <link rel="alternate" type="text/html" href="https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&diff=459452504&oldid=prev"/>
    <updated>2020-09-14T22:46:06Z</updated>
    <summary type="html">&lt;p&gt;&lt;span dir="auto"&gt;&lt;span class="autocomment"&gt;Changed an entity: &lt;/span&gt;&lt;/span&gt; Adding structured data: camera &amp;amp; copyright&lt;/p&gt; &lt;table
    style="background-color: #fff; color: #202122;" data-mw="interface"&gt; &lt;col class="diff-marker" /&gt; &lt;col class="diff-content" /&gt; &lt;col class="diff-marker" /&gt; &lt;col
    class="diff-content" /&gt; &lt;tr class="diff-title" lang="en"&gt; &lt;td colspan="2" style="background-color: #fff; color: #202122; text-align: center;"&gt;← Older revision&lt;/td&gt; &lt;td
    colspan="2" style="background-color: #fff; color: #202122; text-align: center;"&gt;Revision as of 22:46, 14 September 2020&lt;/td&gt; &lt;/tr&gt;&lt;tr class="mw-diff-slot-header"
    lang="en"&gt;&lt;th colspan="4"&gt;mediainfo&lt;/th&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td colspan="2" class="diff-lineno"&gt;Property / &lt;a
    title="d:Special:EntityPage/P4082" href="https://www.wikidata.org/wiki/Special:EntityPage/P4082"&gt;image captured with&lt;/a&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2"&gt;&amp;nbsp;&lt;/td&gt;&lt;td
    class="diff-marker" data-marker="+"&gt;&lt;/td&gt;&lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em; border-
    color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;&lt;a title="d:Special:EntityPage/Q12071929"
    href="https://www.wikidata.org/wiki/Special:EntityPage/Q12071929"&gt;Nikon D70s&lt;/a&gt;&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td
    colspan="2" class="diff-lineno"&gt;Property / &lt;a title="d:Special:EntityPage/P4082" href="https://www.wikidata.org/wiki/Special:EntityPage/P4082"&gt;image captured with&lt;/a&gt;:
    &lt;a title="d:Special:EntityPage/Q12071929" href="https://www.wikidata.org/wiki/Special:EntityPage/Q12071929"&gt;Nikon D70s&lt;/a&gt; / rank&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2"&gt;&amp;nbsp;
    &lt;/td&gt;&lt;td class="diff-marker" data-marker="+"&gt;&lt;/td&gt;&lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em;
    border-color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;Normal rank&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;
    &lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td colspan="2" class="diff-lineno"&gt;Property / &lt;a title="d:Special:EntityPage/P275"
    href="https://www.wikidata.org/wiki/Special:EntityPage/P275"&gt;copyright license&lt;/a&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2"&gt;&amp;nbsp;&lt;/td&gt;&lt;td class="diff-marker" data-marker="+"&gt;&lt;/td&gt;
    &lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em; border-color: #a3d3ff; vertical-align: top; white-
    space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;&lt;a title="d:Special:EntityPage/Q18199165"
    href="https://www.wikidata.org/wiki/Special:EntityPage/Q18199165"&gt;Creative Commons Attribution-ShareAlike 4.0 International&lt;/a&gt;&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td
    colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td colspan="2" class="diff-lineno"&gt;Property / &lt;a title="d:Special:EntityPage/P275"
    href="https://www.wikidata.org/wiki/Special:EntityPage/P275"&gt;copyright license&lt;/a&gt;: &lt;a title="d:Special:EntityPage/Q18199165"
    href="https://www.wikidata.org/wiki/Special:EntityPage/Q18199165"&gt;Creative Commons Attribution-ShareAlike 4.0 International&lt;/a&gt; / rank&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td
    colspan="2"&gt;&amp;nbsp;&lt;/td&gt;&lt;td class="diff-marker" data-marker="+"&gt;&lt;/td&gt;&lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px;
    border-radius: 0.33em; border-color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;Normal
    rank&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td colspan="2" class="diff-lineno"&gt;Property / &lt;a title="d:Special:EntityPage/P6216"
    href="https://www.wikidata.org/wiki/Special:EntityPage/P6216"&gt;copyright status&lt;/a&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2"&gt;&amp;nbsp;&lt;/td&gt;&lt;td class="diff-marker" data-marker="+"&gt;&lt;/td&gt;
    &lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em; border-color: #a3d3ff; vertical-align: top; white-
    space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;&lt;a title="d:Special:EntityPage/Q50423863"
    href="https://www.wikidata.org/wiki/Special:EntityPage/Q50423863"&gt;copyrighted&lt;/a&gt;&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td
    colspan="2" class="diff-lineno"&gt;Property / &lt;a title="d:Special:EntityPage/P6216" href="https://www.wikidata.org/wiki/Special:EntityPage/P6216"&gt;copyright status&lt;/a&gt;: &lt;a
    title="d:Special:EntityPage/Q50423863" href="https://www.wikidata.org/wiki/Special:EntityPage/Q50423863"&gt;copyrighted&lt;/a&gt; / rank&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2"&gt;&amp;nbsp;&lt;/td&gt;
    &lt;td class="diff-marker" data-marker="+"&gt;&lt;/td&gt;&lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em;
    border-color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;Normal rank&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;
    &lt;/td&gt;&lt;/tr&gt;&lt;/table&gt;&lt;/summary&gt;</summary>
    <author>
      <name>BotMultichill</name>
    </author>
  </entry>
  <entry>
    <id>https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&diff=431350119&oldid=prev</id>
    <title>JarektBot: /* wbcreateclaim-create:1| */ d:Special:EntityPage/P6243: d:Special:EntityPage/Q61766152, batch #38228</title>
    <link rel="alternate" type="text/html" href="https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&diff=431350119&oldid=prev"/>
    <updated>2020-07-06T15:58:06Z</updated>
    <summary type="html">&lt;p&gt;&lt;span dir="auto"&gt;&lt;span class="autocomment"&gt;Created claim: &lt;/span&gt;&lt;/span&gt; &lt;a href="https://www.wikidata.org/wiki/Special:EntityPage/P6243"
    class="extiw" title="digital representation of | faithful digitized representation of the indicated object or work. For use on Commons MediaInfo entities."&gt;&lt;span
    class="wb-itemlink"&gt;&lt;span class="wb-itemlink-label" lang="en" dir="ltr"&gt;digital representation of&lt;/span&gt; &lt;span class="wb-itemlink-id"&gt;(P6243)&lt;/span&gt;&lt;/span&gt;&lt;/a&gt;: &lt;a
    href="https://www.wikidata.org/wiki/Special:EntityPage/Q61766152" class="extiw" title="Porta-Retrato | Item from the Santos Dumont Collection at Museu Paulista - 5"&gt;
    &lt;span class="wb-itemlink"&gt;&lt;span class="wb-itemlink-label" lang="en" dir="ltr"&gt;Porta-Retrato&lt;/span&gt; &lt;span class="wb-itemlink-id"&gt;(Q61766152)&lt;/span&gt;&lt;/span&gt;&lt;/a&gt;, &lt;a
    href="https://iw.toolforge.org/quickstatements/#.2Fbatch.2F38228" class="extiw" title="toollabs:quickstatements/"&gt;batch #38228&lt;/a&gt;&lt;/p&gt; &lt;table style="background-color:
    #fff; color: #202122;" data-mw="interface"&gt; &lt;col class="diff-marker" /&gt; &lt;col class="diff-content" /&gt; &lt;col class="diff-marker" /&gt; &lt;col class="diff-content" /&gt; &lt;tr
    class="diff-title" lang="en"&gt; &lt;td colspan="2" style="background-color: #fff; color: #202122; text-align: center;"&gt;← Older revision&lt;/td&gt; &lt;td colspan="2"
    style="background-color: #fff; color: #202122; text-align: center;"&gt;Revision as of 15:58, 6 July 2020&lt;/td&gt; &lt;/tr&gt;&lt;tr class="mw-diff-slot-header" lang="en"&gt;&lt;th
    colspan="4"&gt;mediainfo&lt;/th&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td colspan="2" class="diff-lineno"&gt;Property / &lt;a title="d:Special:EntityPage/P6243"
    href="https://www.wikidata.org/wiki/Special:EntityPage/P6243"&gt;digital representation of&lt;/a&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2"&gt;&amp;nbsp;&lt;/td&gt;&lt;td class="diff-marker" data-
    marker="+"&gt;&lt;/td&gt;&lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px; border-radius: 0.33em; border-color: #a3d3ff; vertical-
    align: top; white-space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;&lt;a title="d:Special:EntityPage/Q61766152"
    href="https://www.wikidata.org/wiki/Special:EntityPage/Q61766152"&gt;Porta-Retrato&lt;/a&gt;&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td colspan="2" class="diff-lineno"&gt;&lt;/td&gt;&lt;td
    colspan="2" class="diff-lineno"&gt;Property / &lt;a title="d:Special:EntityPage/P6243" href="https://www.wikidata.org/wiki/Special:EntityPage/P6243"&gt;digital representation
    of&lt;/a&gt;: &lt;a title="d:Special:EntityPage/Q61766152" href="https://www.wikidata.org/wiki/Special:EntityPage/Q61766152"&gt;Porta-Retrato&lt;/a&gt; / rank&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td
    colspan="2"&gt;&amp;nbsp;&lt;/td&gt;&lt;td class="diff-marker" data-marker="+"&gt;&lt;/td&gt;&lt;td style="color: #202122; font-size: 88%; border-style: solid; border-width: 1px 1px 1px 4px;
    border-radius: 0.33em; border-color: #a3d3ff; vertical-align: top; white-space: pre-wrap;"&gt;&lt;div&gt;&lt;ins style="font-weight: bold; text-decoration: none;"&gt;&lt;span&gt;Normal
    rank&lt;/span&gt;&lt;/ins&gt;&lt;/div&gt;&lt;/td&gt;&lt;/tr&gt;&lt;/table&gt;&lt;/summary&gt;</summary>
    <author>
      <name>JarektBot</name>
```


https://commons.wikimedia.org/w/index.php?title=File:Porta-Retrato,_Acervo_do_Museu_Paulista_da_USP_(18).jpg&feed=atom&action=history

4
monitoring
reuse
data: indicators and metrics

4
monitoring
reuse data
reference (iii)



Wikitech

English Create account Log in

Page Discussion Read View source View history Search Wikitech

Analytics/Systems/AQS

< Analytics | Systems

The **Analytics Query Service** (AQS) is a public facing API that serves analytics data from both a Cassandra and a Druid backend.

Contents [hide]

1 Hosted API
2 Scaling: Settings, Failover and Capacity Projections
3 Monitoring
4 Throttling
  4.1 2016-05-26
  4.2 2016-09-21
5 Developing a New Endpoint
6 Deployment
  6.1 Step 0: Testing AQS locally
    6.1.1 With cassandra
    6.1.2 With druid
  6.2 Step 1: Update the AQS deploy repository
    6.2.1 Issues with "src" path
    6.2.2 Issues with git review
    6.2.3 NPM vulnerabilities
  6.3 Step 2: Deploy using scap
  6.4 Step 3: Test
    6.4.1 Staging (beta)
    6.4.2 Production
  6.5 Troubleshooting Deployment
    6.5.1 Issues with deployment to labs deploy
    6.5.2 Issues with scap
    6.5.3 Check deploy logs:
    6.5.4 Check AQS logs:
7 Administration
  7.1 Cassandra CLI
  7.2 Load data into cassandra in beta
  7.3 Restbase status
  7.4 Cassandra status
  7.5 Cassandra logs
  7.6 Network Configuration
  7.7 Deploy new History snapshot for Wikistats Backend
  7.8 Useful comands
    7.8.1 Password
  7.9 Add fake data to Cassandra after wiping the cluster

Main page
Recent changes
Server admin log (Prod)
Server admin log (RelEng)
Deployments [curr]
SRE/Operations Help
Incident status

Cloud VPS & Toolforge
Cloud VPS documentation
Toolforge documentation
Request Cloud VPS project
Server admin log (Cloud VPS)

Tools
What links here
Related changes
Special pages
Permanent link
Page information
Cite this page

Print/export
Create a book
Download as PDF
Printable version

https://wikitech.wikimedia.org/wiki/Analytics/Systems/AQS

research and development challenge: integrating all these parts into a new roundtripping plugin to WordPress

Thank you!

daltonmartins@unb.br