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Online & NeuroMat, São Paulo, Brazil

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# Structuring the Wikimedia Ecosystem



#### Overview

- 1) Interwiki links through Wikidata
- 2) Matching new Wikipedia articles with Wikidata
- 3) Importing basic information about new articles
- 4) Matching Commons categories with Wikidata
- 5) Expanding to cover other sibling projects
- 6) Conclusions
- 7) Afternoon tasks

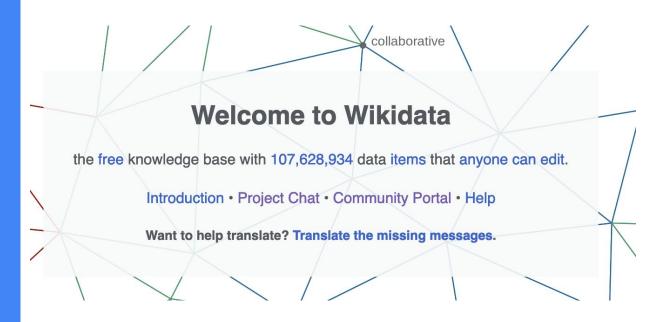
#### The Wikimedia Ecosystem

- Wikipedia is the most well-known
   Wikimedia project. It has siblings.
- Knowledge exists in many ways, so we need many projects. Not everything should become an encyclopedic entry.
- Wikimedia projects are sustained by a non-proprietary content licence, a collaborative technical infrastructure and a community.

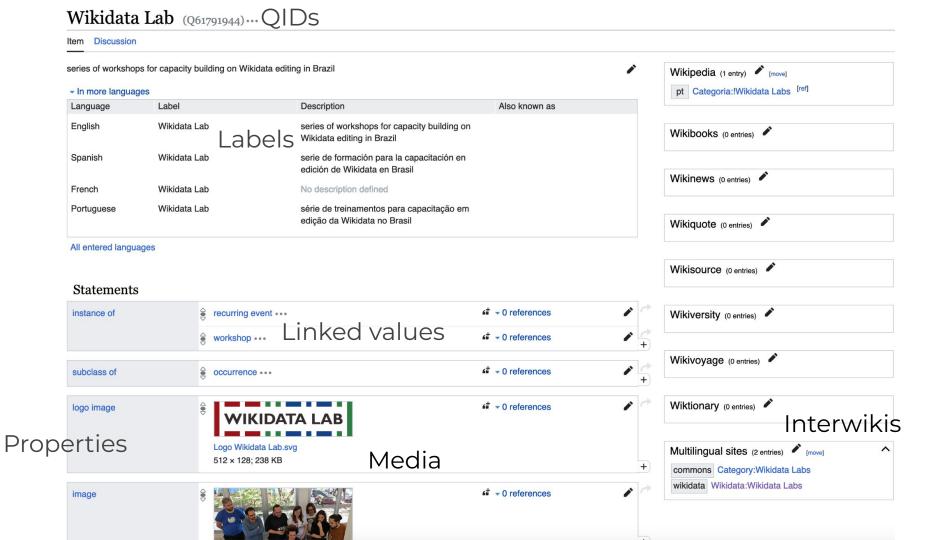


## Wikidata is an open collaborative knowledge base

It is a fast-growing Wikimedia project, one of the newest, started in 2012 - over 2 billion edits!



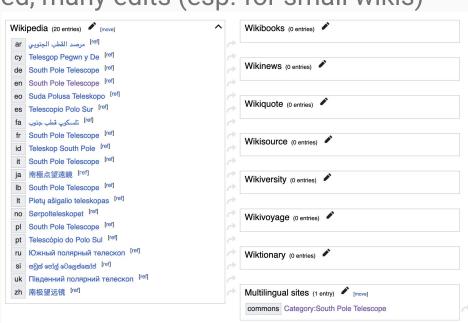
(# of items will already be out-of-date!)



#### Interwiki links through Wikidata - simpler

- From the beginning, Wikidata has greatly improved interwiki linking
- Used to have to link to every language from every language!
- NxN problem, had to be bot-managed, many edits (esp. for small wikis)
- Now, link languages to Wikidata
- → N+1 problem
- Also link sibling projects
- Significantly simpler and scalable!

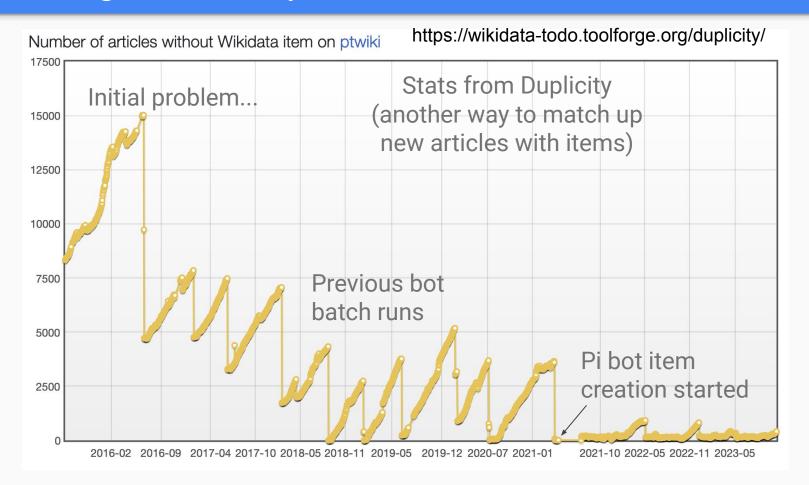
(example: Q1513315)

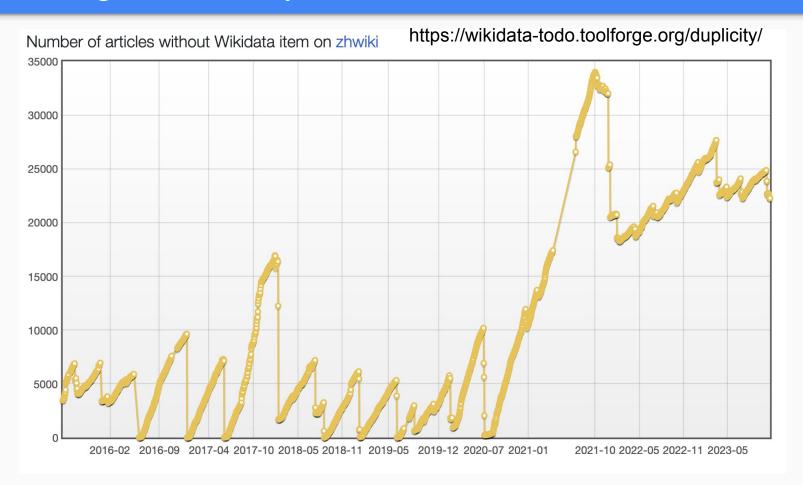


#### Interwiki links through Wikidata - but complications

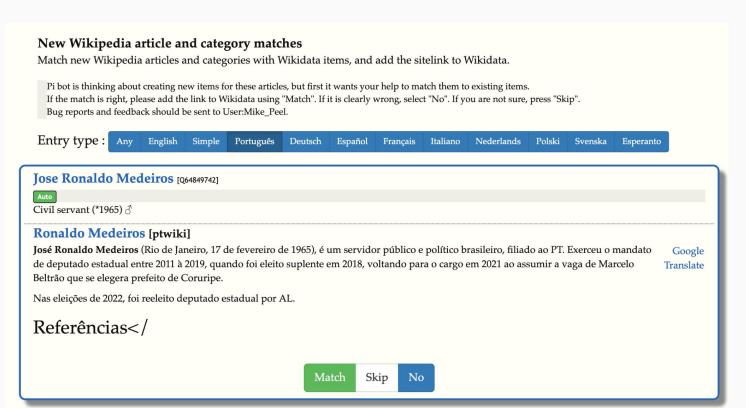
- Still some complications...
- Only one sitelink per language project per item
- Commons galleries are in main item, category gets separate item, then 'Topic's main category' (P910) & 'Category's main topic' (P301) properties to link between them (unless there is no gallery, then the category link goes in main item)
- Also links between lists and category items, 'list related to category' (P1753) and 'category related to list' (P1754)
- What happens when Wikipedia articles combine topics?
- Sitelinks now allowed to redirects, which helps!

- When a new article is created, it needs linking with Wikidata
- Ideally, article creators match up their new article to Wikidata!
   (automatic when using the article translation tool, manual otherwise)
- Pi bot runs an automated process for matches/new items
- Only looks at mainspace/categories/places that should be connected to Wikidata (not everything is in scope)
  - Searches for matches, loads results into a game only creates a new item once all these have been manually checked
  - Waits 14 days before creating new item, also avoiding recently edited items, to give time for manual matches...
- Currently live on a few projects potential roll-out to the rest? Community consensus needed, or proven to work now?





https://wikidata-game.toolforge.org/distributed/#game=82



https://wikidata-game.toolforge.org/distributed/#game=82



#### Importing basic information about new articles

- It's more helpful to have basic information in a Wikidata item than empty
- Based on article title, category usage, etc.
- Biographies are handled differently immediate matches and new items created, based on name and birth dates (unless there are ambiguities)
  - This includes gender identification (open question: is this a good idea?)

```
elif 'lista de' in page.title()[0:10].lower():
    # input('Is list - OK?')
    claim = pywikibot.Claim(repo, 'P31')
    claim.setTarget(pywikibot.ItemPage(repo, 'Q13406463')) # List item
    new_item.addClaim(claim, summary='List item')
```

#### Importing basic information about new articles

- Pi bot also runs tasks to bulk-import content from Wikipedias:
  - Short descriptions from enwiki
  - Coordinates from enwiki, commons
  - Birth/death dates (although this can import vandalism...)
- Could do more?
  - Authority control
  - Infobox parameters? (but tricky to match with Wikidata items)
  - o ideas...?

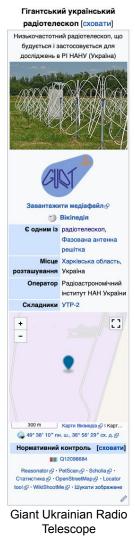
- Commons links before Wikidata were mostly Wikipedia templates
- Wikidata changed this dramatically can now sitelink to Commons!
- Big effort to do this over the last 5 years, driven by Wikidata Infobox
- Wikidata now has nearly 5 million sitelinks to Commons!
- 'Commons category' P373 also exists, but is not so useful
  - Was set up as a temporary measure until sitelinks existed...
  - Can have multiple values, link to same category from multiple items
  - But is one-directional, can find the Commons category from Wikidata, but not Wikidata from the Commons category
  - (deletion attempts haven't succeeded yet open discussion point?)

## Wikidata Infobox on Wikimedia Commons



- Started in 2018, bot-deployed in 4.7 million Commons categories!
- Small infobox to add context for category contents, without hiding category contents
- Needs sitelink to connect to Wikidata
- Using Wikidata information only (no local definitions) - completely multilingual code: {{Wikidata Infobox}}
- Images on Wikidata shown alongside Commons category - are best images selected? (+ night image etc...?)
- (Ideally used across all projects, same for important data like birthdays etc.)
- Authority control at the bottom (none for NeuroMat - please add some!)
- Continuous development with community input and suggestions















(when no Wikidata is sitelinked)

- A lot of links are bot-added, e.g., when someone adds {{Commons category}} to enwiki, or a P373 value to Wikidata.
- Various users batch-add links, e.g., via Wiki Loves Monuments process
- Also bulk-creating, e.g., categories for ships (IMO #) and ship names
- Many have been manually added when categories are created etc.
- A Wikidata Game exists to review possible matches
  - Fed by Python scripts that, e.g., search for category name matches
  - So far has added 46k links, 67k possible matches currently in game
  - (can easily add more when the backlog is lower!)

#### https://wikidata-game.toolforge.org/distributed/#game=44

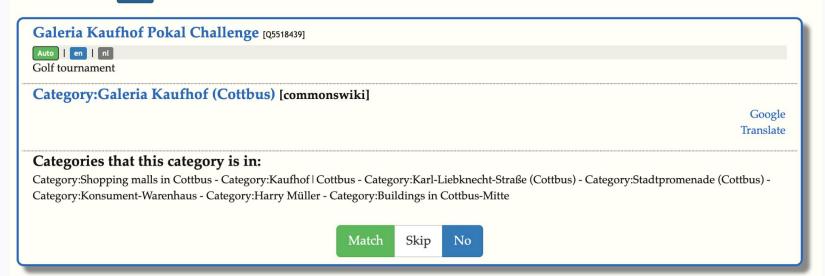
#### Commons category matches

Match Commons categories with Wikidata items, and add the commons sitelink to Wikidata.

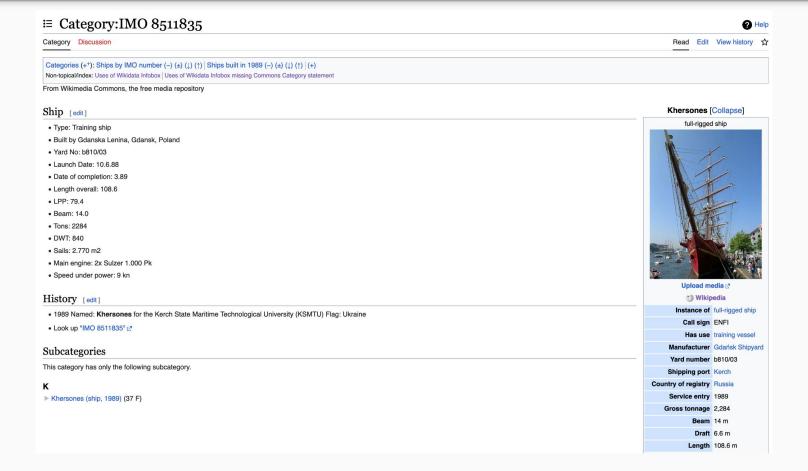
These matches look plausible. But are they really? Please help us to reject the bad ones by clicking "No" - and if you are sure that it is right, add the link to Wikidata using "Match". If you are not sure, press "Skip".

Bug reports and feedback should be sent to commons: User: Mike Peel.

#### Entry type: Any



- Could bulk-create new items, except:
  - Might cause duplicates (could minimise using the Game)
  - Notability issues, particularly for humans
  - 'Category combines' categories aren't liked by Wikidata people
- Open question: galleries vs. categories do the former still make sense?
  - There are a lot of unmaintained categories delete/redirect?
- We now have Structured Data on Commons will this replace categories?
- There is also the P373 data duplication issue, with a backlog of mismatches (also in Wikipedia articles via templates)



### Expanding to cover other sibling projects

- Ultimate aim: all Wikimedia projects should have all sitelinks on Wikidata, how to get there?
- Currently looking at en.wikiquote as an example can find matches and create new items OK - but what to do with possible matches?
  - It seems there is a bug in the Wikidata game it works OK for Wikipedias and Commons, but not other projects - can anyone help?
- Wikisource more complicated, since Wikidata has separate items for book editions, which may not match up with Wikipedia articles
  - Some language Wikisources are well integrated, others not yet
- Wikispecies still needed? Multiple taxon trees on different projects

#### Conclusions

- Wikipedias: mostly linked, but new articles are tricky
  - Can expand to cover more languages
  - Can improve with importing statements into new items
- Commons: about half way, still a lot to do here
  - P373 still a tricky issue
- Other sibling projects need a lot of work
  - Also related, BOT currently has 'Siblings Projects Task Force' looking at how to handle new projects, and close/merge/split existing projects if appropriate - more news from that soon.

#### Afternoon tasks

- Play the Wikidata games!
- Identify patterns in new articles that Pi bot can use
- Other ways of selecting information from Wikipedia articles to import?
- Additional languages that the bot can work on?
- Ideas for new games / approaches to this problem
- Write some code (game/bot script/etc.?)
  - Pi bot code all available at <a href="https://github.com/mpeel/wikicode/">https://github.com/mpeel/wikicode/</a>
- Create new Wikidata items for Commons categories
- Event main page: <a href="https://w.wiki/85J\$">https://w.wiki/85J\$</a>
- Make sure to register for edit tracking: <a href="https://t.ly/rFhnt">https://t.ly/rFhnt</a>