# Open Science and Exploitation

**Policy and Practice** 

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# A large-scale COVID-19 Twitter chatter dataset for open scientific research - an international collaboration

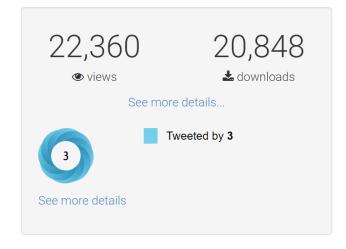
ⓑ Banda, Juan M.; ⓑ Tekumalla, Ramya; Wang, Guanyu; Yu, Jingyuan; Liu, Tuo; Ding, Yuning; Artemova, Katya; Tutubalina, Elena; ⓑ Chowell, Gerardo

NEW in Version 17: Besides our regular update, we now have included the tweet identifiers and their respective tweet location place country code for the clean version of the dataset. This is found on the clean\_place\_country.tar.gz file, each file is identified by the two-character ISO country code as the file suffix.

Due to the relevance of the COVID-19 global pandemic, we are releasing our dataset of tweets acquired from the Twitter Stream related to COVID-19 chatter. Since our first release we have received additional data from our new collaborators, allowing this resource to grow to its current size. Dedicated data gathering started from March 11th yielding over 4 million tweets a day. We have added additional data provided by our new collaborators from January 27th to March 27th, to provide extra longitudinal coverage. Version 10 added ~1.5 million tweets in the Russian language collected between January 1st and May 8th, gracefully provided to us by: Katya Artemova (NRU HSE) and Elena Tutubalina (KFU). From version 12 we have included daily hashtags, mentions and emoijis and their frequencies the respective zip files. From version 14 we have included the tweet identifiers and their respective language for the clean version of the dataset. This is found on the clean\_languages.tar.gz file, each file is identified by the two-character language code as the file suffix.

The data collected from the stream captures all languages, but the higher prevalence are: English, Spanish, and French. We release all tweets and retweets on the full\_dataset.tsv file (468,169,539 unique tweets), and a cleaned version with no retweets on the full\_dataset-clean.tsv file (115,262,201 unique tweets). There are several practical reasons for us to leave the retweets, tracing important tweets and their dissemination is one of them. For NLP tasks we provide the top 1000 frequent terms in frequent\_terms.csv, the top 1000 bigrams in frequent\_bigrams.csv, and the top 1000 trigrams in frequent\_trigrams.csv. Some general statistics per day are included for both datasets in the statistics-full\_dataset.tsv and statistics-full\_dataset-clean.tsv files. For more statistics and some visualizations visit: http://www.panacealab.org/covid19/

More details can be found (and will be updated faster at: https://github.com/thepanacealab/covid19\_twitter) and our









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COSC NAME







information and see if we can help. What is your first name?

#### Fred

Fred.

#### Emily

And your last name; would you spell it for me please? Fred Sure. It's C-H-A-M-B-E-R-S, Chambers.

#### Emily

Okay. And your company name?

#### Fred

I'm with GoldStar Environmental.

#### Emily

GoldStar Environmental?

#### Fred

Yes ma'am.

#### Emily

01 1 1 1 1 2

system:

#### Fred

No, actually, I can't even get an Internet connection.

#### **Emily**

Okay. According to my records, the AmStar700 is a voiceover Internet protocol phone. It appears that because your Internet isn't working, your phones are not working as well. Do you know who your Internet provider is?

#### Fred

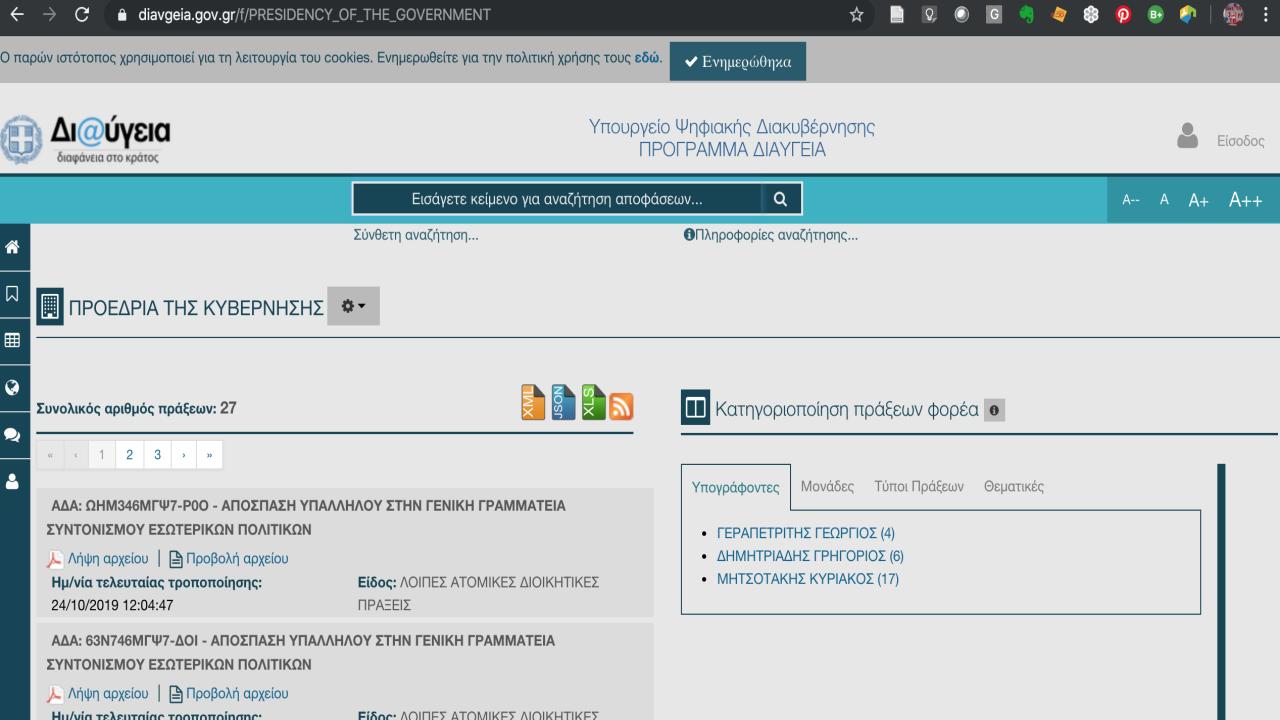
I have Verizon.

#### Emily

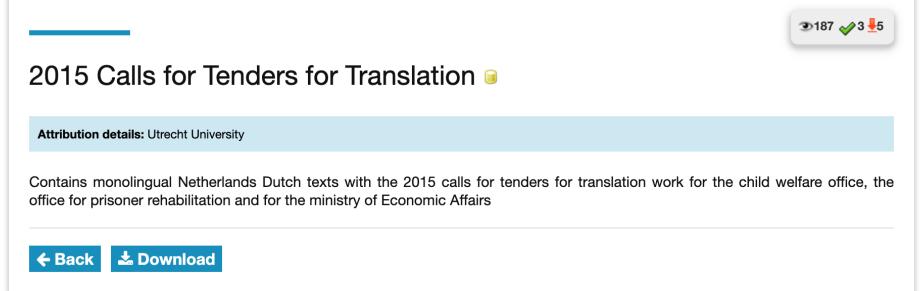
Okay. Mr. Chambers, I'm going to get a hold of Randy, and have him return your call. Is the 610-265-1715 a good number to reach you at right now?

#### Fred

Yeah that's my cell. That is working.



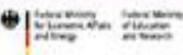












# **Project GAIA-X**

A Federated Data Infrastructure as the Cradle of a Vibrant European Ecosystem





Home > Resources > Publications

#### **Identifying Inventions in the Public Domain**

#### A Guide for Inventors and Entrepreneurs

Author(s): | Publication year: 2020

License:



This guide aims to assist researchers, inventors and entrepreneurs in determining whether specific inventions are protected by enforceable patents or may be in the public domain, by teaching a three-stage process for searching and analyzing published patent documents using the tools of freedom to operate determination. Designed for self-study, the guide has easy-to-follow training modules that take the reader through the process step by step, including with the help of useful checklists and other tools.

Download

English PDF

## Research:

- Does not happen only in the lab or the university
- Is heavily digitally mediated
- It involves multiple types of material and works
- It includes all type of Intellectual Property Rights
- It involves multiple types of actors under different regulatory regimes
- It should not be approached at the end of the research process, but rather from its outset



Regulating flows of information

# Life-cycle essentials

- Initiating the research:
  - Do I have the property rights?
  - Do I have a licence?
  - Are there special regimes I have to respect?
  - Is there any funding?
  - Are there any contractual relationships?
- Conducting the research
  - Arrangements with my RPO/ RFO
  - Codes of Conduct
  - Confidentiality Regimes
  - Access controls
  - Consortia and partnerships
  - IPR (patents/ trademarks) registration arrangements and ownership agreements
- **Sharing** the research
  - Inter-organizational sharing
  - Opening up
  - Limited licensing
  - Exploitation (patents/ commercial licensing)

#### Research

- May include public domain
- May include copyrighted Works
- May lead to a patent
- May be based on a grant agreement
- May be in the context of a consortium agreement
- Sui Generis Databases
- Data that need to flow between countries
- May contain confidential information/ trade secrets
- May contain personal data
- May contain geodata
- May contain/ be public sector information
- May be protected as cultural heritage

## Regimes of Property

- Copyright
- Related Rights
- Sui Generis Data Base Right (SGDB)

- Confidentiality agreements
- Funding limitations (open and closed)
- Consortium limitations

- Patents
- Domain Names
- Trademarks

- contractual

#### There is IPR beyond Copyright

- Copyrighted material may contain other rights:
  - Trademarks
  - Trade secrets
  - Patents
- Patented material is affected by copyrighted material
  - Time of publication
  - Copyright affects disclosure

## Regimes of Protection

- Personal Data (GDPR)
- Pharmaceutical regulation/ medical regulation
- Confidential Information/ Trade Secrets
- Cultural Heritage
- Research Ethics
- National Security
- Security
- Content/ platform regulation

## Regimes of Openness

- PSI / Open Data
- Open Culture (Europeana)
- Open Science (EOSC/ OpenAIRE)
- Free flow of non-personal information (links with regulatory authorities)
- Copyright II
  - Public Domain
  - Limitations and Exceptions/ Fair Use/ Fair Dealing
  - Open Licences
- Patent publications and metadata

#### Ownership vs. Licensing

- Who owns the material is straightforward:
  - Consortium agreements
  - Funding Agreements
  - Co-authorship
  - Institutional framework

#### A question of who

- Initial ownership may be transferred:
  - RFO
  - RPO
  - Publisher
  - Collecting Society
  - Collecting Organisation
  - Spin off/ out
  - Licensee
- Do we own the material?

#### A question of when

- If I am to license out:
  - Decide on commercial exploitation
  - Disclose only when I am not bound by:
    - Confidentiality
    - Patent application pending
- After I have patented:
  - Can go for open access
  - Attention to the value model

#### A question of what

- Need to decide:
  - What to release what to keep
  - Collaborate with the TTO
  - Collaborate with the library
  - Collaborate with the NOAD

**Considerations and Questions** 

# Rights Rights Output Description: Rights Rights

# Who am 1?

# Producer/ Collector of Research

> Need to obtain all necessary rights

Disseminator of Research

> Need to use the licences that support my value model

### 1. Is it mine?



- 3<sup>rd</sup> Party Copyright/ SGDB/ patents
- Personal Data
- Confidential Information
  - Trade secrets
  - Confidential info
  - National Security limitations
- Special regimes
  - Cultural heritage
  - Medical/ Health/ pharma

# 2. Is it truly mine?

#### A. Copyright and Patents

- 1. Public Domain
- 2. Am I covered by a limitation (fair use)?
- 3. Is the correct licence there?
  - 1. Open Licence
  - 2. Compatible Open Licence
- 4. Am I risking a patent filing?
- 5. What does my consortium/ grant agreement say?

C. Is it clear of any confidential information?

#### B. GDPR

- 1. Scientific Research Exception
- 2. Public Interest/ Mission
- 3. Legal Obligation
- 4. (Legal Interest)
- 5. Prior Informed Consent (PIC)

- D. Have I obtained all special regimes licences?
- Security clearance
- Testing and protocols (life sciences)
- Special permissions (stats/ culture)



# 4. How to Share II (licensing)

- Ensure you do not violate:
  - Access protocols
  - Patent filing process (disclosure)
  - Other contractual arrangementa and agreements
  - Confidentiality
- Include a PSI notice if applicable in your jurisdiction
  - Notice new PSI rules!
- Use standard licences (Creative Commons)
- Use Free Cultural Heritage Works Licences
  - CC Zero
  - CC BY 4.0 int.
  - CC BY SA 4.0 int
- If you use additional restrictions (ND/ NC)
  - Always provide a way to obtain more rights (through additional licences)

- If you use custom licences:
  - Understand what your value model is
  - Ensure no other standard licences exist
  - Ensure they do not contain any copyleft elements
  - Ensure they are machine readable
- If you use restrictive licences:
  - Ensure you reduce frictions through electronic transactions





conclusions

#### Conclusions

- Research does not only include publications and repo-data
- There are several legal regimes covering research (some permissive some restrictive) – we need to make the best use of them
- Always clear your content/ data before your release
- Clearing is not just about copyright
- Make use of Public Domain
- Follow protocols (patents/ ethics/ access)
- Watch the new PSI implementations / Open Science / platform/ content regulations
- Follow the Keep It Stupid Simple (KISS) principle in all licensing choices
- Use existing open infrastructure
- Interoperate with major initiatives national, international, European, public and private

Q+A