

Outline

- The original project and its results
- Current status:
 - Ongoing activities
 - Activities focused on facilitating the use for research
 - Usage by researchers
- Envisaged future work
- Contact information



About Europeana

- Aggregates metadata from the cultural heritage sector in Europe
 - libraries, museums, archives and audio-visual archives
- Provides a portal for users to access data and objects
 - http://www.europeana.eu/
 - Metadata under Creative Commons Zero public domain
 - Previews and links to source
- Data distributed via
 - API http://labs.europeana.eu/api/
 - Linked Data (currently being updated)
 - http://data.europeana.eu/

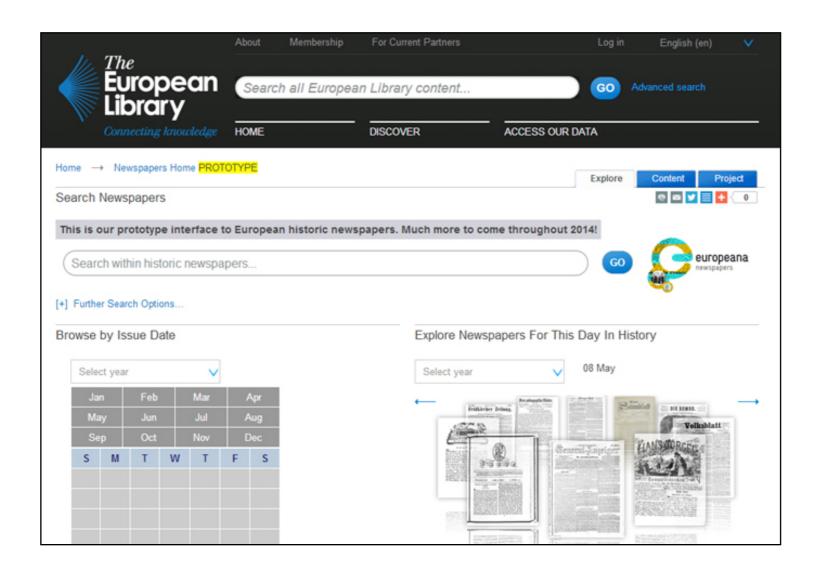


Europeana Newspapers: The initial project phase

- ICT-PSP project (2012 2015)
- http://www.europeana-newspapers.eu
- Final report: http://europeananewspapers.github.io/
- Main results:
 - 12 million pages newspaper images + OCR full text
 - 3.6 thousand metadata records relating to 20 million pages
 - Search and browse newspaper portal at The European Library: http://www.theeuropeanlibrary.org/tel4/newspapers



Search and browse newspaper portal at The European Library



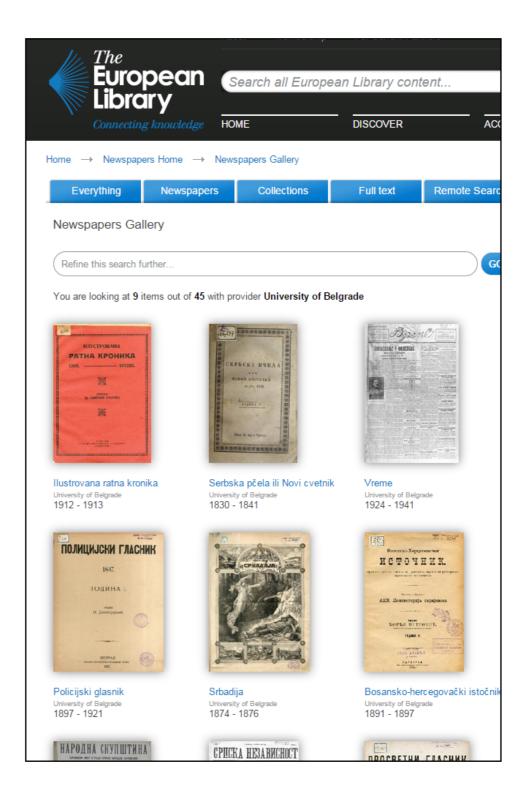
Article level searching



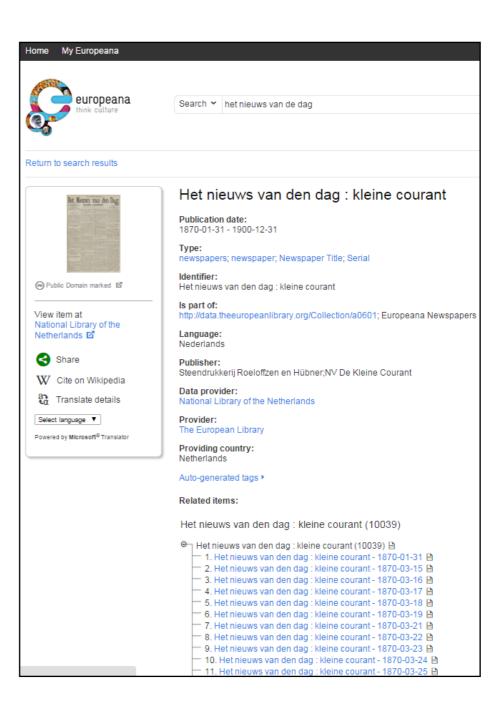
Individual Page Item



Title Search



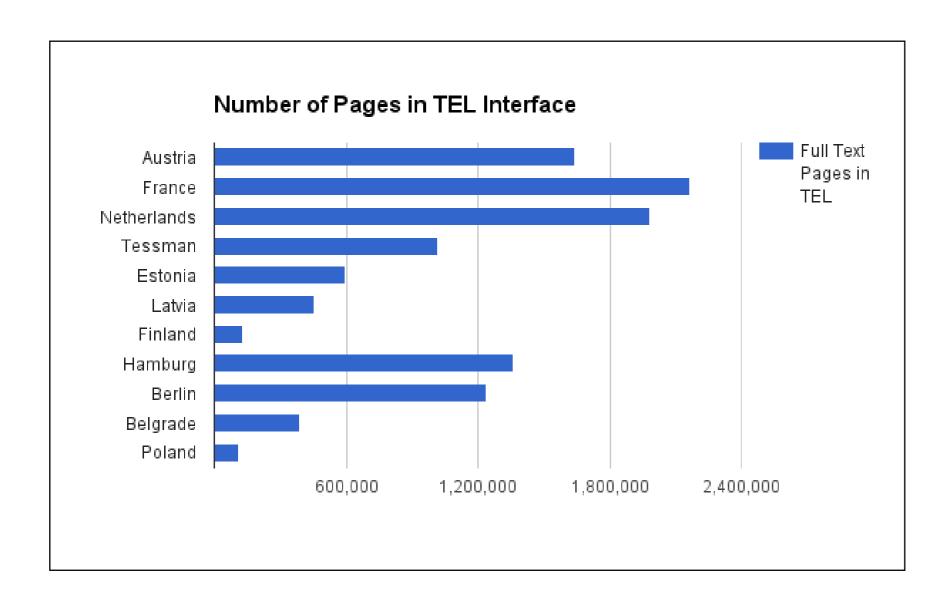
Surfacing Data in Europeana



Surfacing Content in Europeana



The Aggregated Content



Circa 11.5m full text pages and images from **full partners** have been made available in The European Library.

The same number of images is available in Europeana, with full text (although not searchable)

No content from Associate Partners has yet been integrated, but it will be added.

Europeana Newspapers

Towards a sustainable service

- Active social media and communication channels in place (Blog, Twitter, Facebook, LinkedIn)
- Ongoing colaboration with the Digital Public Library of America (DPLA) on usecases for newspapers
- Active participation in the newspapers interest group of the International Image Interoperability Framework (IIIF)
 - A key technology for providing a very rich user interaction with newspapers



Several cases of re-use

Many for research purposes

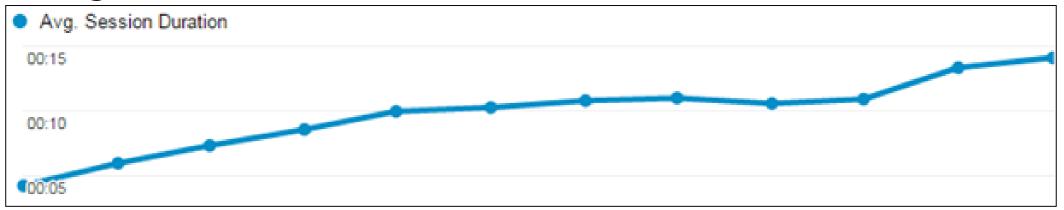
- 10 interviews with researchers: <u>http://www.europeana-newspapers.eu/category/interviews-with-researchers/</u>
- Viral Texts project: http://viraltexts.org/
- Asymetrical Encounters: http://asymenc.wp.hum.uu.nl/
- Wikimedia / Coding Da Vinci: https://codingdavinci.de/daten/#staatsbibliothek-zu-berlin
- CLARIN-D: http://

www.clarin-d.de/en/curation-project-10-1-contemporary-histo

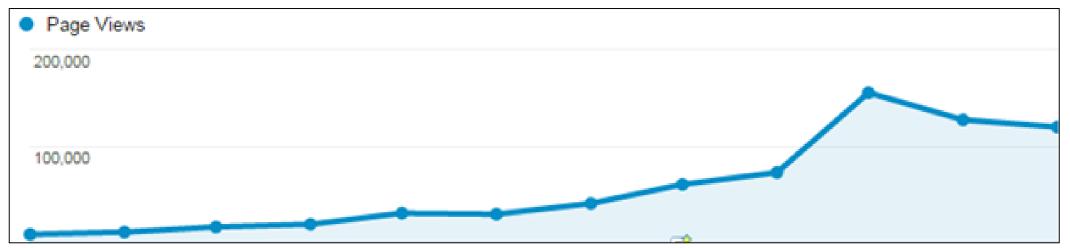


Usage statistics

Average session duration*: ca. 15 min.!



Unique page views/month*: ca. 120,000



* Statistics: 2015 Google Analytics

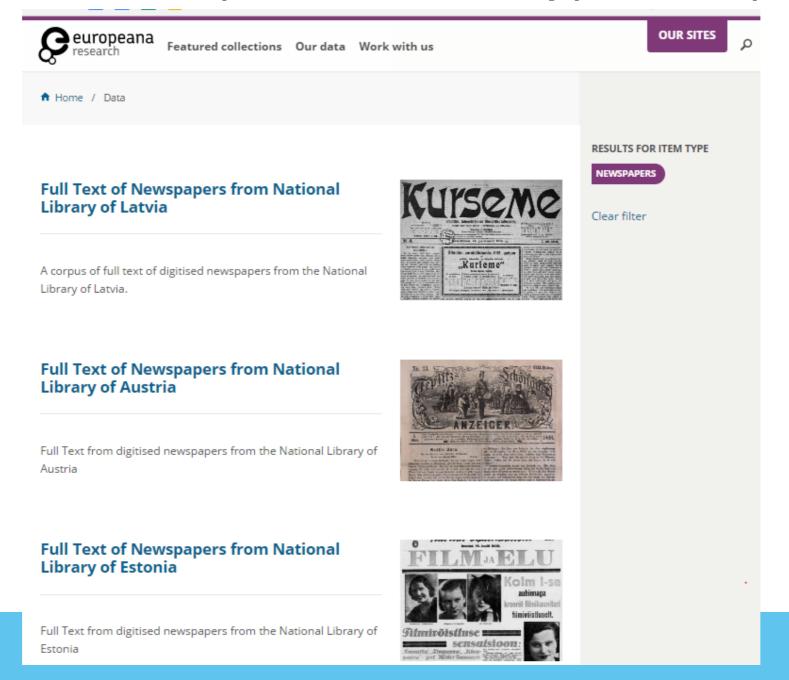


Facilitating re-use for research

- Majority of the public domain content has been released via <u>Europeana Research</u>
- EUDAT Data pilot: <u>https://www.eudat.eu/communities/enriching-europeana-newspapers</u>
- An Open Corpus for Named Entity Recognition in Historic Newspapers



http://research.europeana.eu/itemtype/newspapers



Directory Listing For /newspapers-by-country/FRA/ - <u>Up To</u> /newspapers-by-country

Organized by country, and with one zip archive file per newspaper

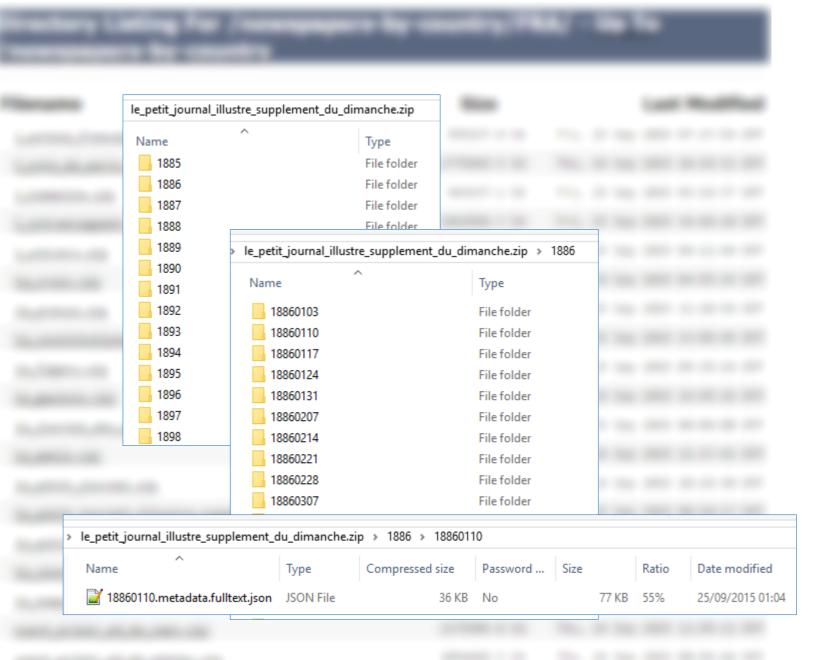
Filename	Size	Last Modified
<pre>l_action_francaise.zip</pre>	955237.8 kb	Fri, 25 Sep 2015 07:27:56 GMT
l_echo_de_paris.zip	1775445.5 kb	Thu, 24 Sep 2015 18:29:31 GMT
<pre>l_humanite.zip</pre>	943337.1 kb	Fri, 25 Sep 2015 03:19:37 GMT
l_intransigeant.zip	1842509.3 kb	Fri, 25 Sep 2015 14:46:18 GMT
l_univers.zip	1031287.9 kb	Fri, 25 Sep 2015 04:22:44 GMT
la_croix.zip	1266204.1 kb	Thu, 24 Sep 2015 04:55:15 GMT
<u>la_presse.zip</u>	1771759.7 kb	Fri, 25 Sep 2015 11:20:54 GMT
<u>le_constitutionnel.zip</u>	1860994.5 kb	Fri, 25 Sep 2015 13:05:45 GMT
<pre>le_figaro.zip</pre>	2204791.5 kb	Fri, 25 Sep 2015 09:39:24 GMT
<u>le_gaulois.zip</u>	1591902.7 kb	Thu, 24 Sep 2015 14:45:26 GMT
<u>le_journal_des_debats_politiques_et_litteraires.zip</u>	2935002.5 kb	Fri, 25 Sep 2015 00:04:00 GMT
<u>le_matin.zip</u>	1881301.2 kb	Thu, 24 Sep 2015 11:17:41 GMT
le_petit_journal.zip	1940498.6 kb	Thu, 24 Sep 2015 20:19:30 GMT
le_petit_journal_illustre_supplement_du_dimanche.zip	84785.9 kb	Fri, 25 Sep 2015 00:10:17 GMT
<pre>le_petit_parisien.zip</pre>	1852303.8 kb	Fri, 25 Sep 2015 02:26:43 GMT
<u>le_siecle.zip</u>	2202365.6 kb	Fri, 25 Sep 2015 06:31:47 GMT
<u>le_temps.zip</u>	2528727.4 kb	Thu, 24 Sep 2015 07:33:29 GMT
ouest_eclair_ed_de_caen.zip	1175985.0 kb	Thu, 24 Sep 2015 12:45:12 GMT
ouest_eclair_ed_de_nantes.zip	1096445.5 kb	Thu, 24 Sep 2015 08:56:46 GMT



... Each newspaper is further subdivided by issue date: year, day ...

... One JSON file, containing metadata and full-text...

... full-text organized by page.





About the JSON files

- The JSON fields named after the properties defined in the DCMI Metadata Terms,
- Full-text is contained in a field is named "contentAsText" and each field contains the text of a single page.
- The field "format" provides an estimate of the quality of the OCR.
 - OCR quality is available in the metadata records of newspapers titles and issues.
 - In the issue records, the measure indicates the average OCR confidence across all words of the issue.
 - In title records, it indicates the average OCR confidence across all the issues of the newspaper title.



Licence

- All full-text is available under Creative Commons
 Public Domain Mark 1.0 (
 https://creativecommons.org/publicdomain/mark/1.0/)
- All metadata is available under CC0 (https://creativecommons.org/publicdomain/zero/1.0/)





Enriching Europeana Newspapers Data Pilot

EUDAT Comunity on Social Sciences and Humanities

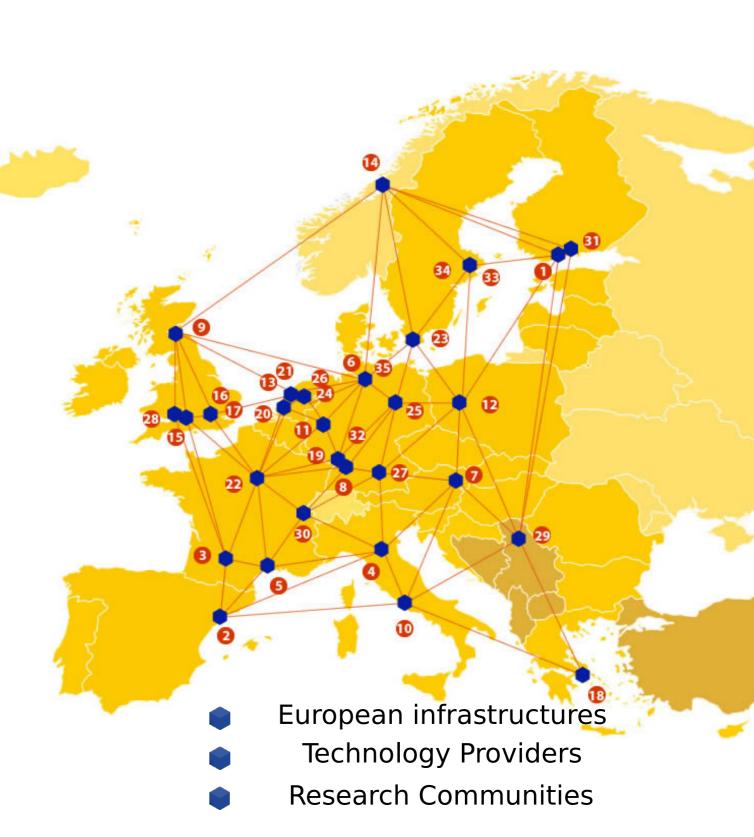




EUDAT EUDAT: A truly pan-European Infrastructure

EUDAT offers common data services to both research communities and individuation through a network of 35 European organisations.

EUDAT wants to enable
European researchers
from any discipline to
preserve, find, access,
and process data in a
trusted environment, as part
of a Collaborative Data
Infrastructure.





Building solutions with the communities

EUDAT services (**B2 Service Suite**) are designed, built and implemented together with user communites.



Common Language Resources and Technology Infrastructure (CLARIN)



European Network for Earth System Modelling (ENES)



Distributed infrastructure for life-science information (ELIXIR)



European Plate Observing System (EPOS) - Solid Earth sciences Research Infrastructure



Integrated Carbon Observation System (ICOS) to quantify & understand greenhouse gas balance



Long-Term Ecosystem Research (LTER) in Europe



Overview of Enriching Europeana Newspapers



- The pilot aims to expose the full text aggregated as part of the Europeana Newspapers project.
- This corpus contains over 11 million pages of full text of historic newspapers
 - Mainly from the 19th century
 - Drawn from national and research libraries across Europe.
- The pilot aims to expose and improve the text for more data driven usage)



The Challenges



- The Generic Challenge
 - How to facilitate the re-use of Cultural Heritage language resources for research purposes
 - .. by exploiting the existing and emerging European research infrastructure
 - How can the resources be discovered
 - How can the resources be shared in practical ways for researchers
 - How can advanced computation be applied to these Cultural Heritage datasets
 - How can the resources and datasets be cited and referenced in research
 - How can the Cultural Heritage institutions re-use the outcomes of research
- The Specific Challenges of the Pilot
 - Creating best practice guidelines for the publication, citation and impact measurement of cultural heritage data
 - Enriching the corpus of historic newspapers via information extraction
 - Showcasing the value of the enrichment by a quantitative analysis
 - Working collaboratively between cultural heritage organizations and researchers from computer science



EUDAT service uptake



The Enriching Europeana Newspaper Pilot will rely on the following EUDAT services:

Research data storage and sharing (B2SHARE): as to undertake the enrichment of the datasets as well as, more generally, expose them for re-use by other academics, particularly those outside the digital humanities



Persistent Identification Service
(B2HANDLE): Persistent identification of the main objects of the full-text corpus: the newspapers titles and individual issues



- Multi-disciplinary joint metadata catalogue (B2FIND): so that scientists will be able to
 - btain the full corpus for machine processing
 - select just a portion of the corpus benefitting from the enrichment of article-level annotations with named entities and topics



An Open Corpus for Named Entity Recognition in Historic Newspapers

LREC2016, 23-28 May 2016, Portorož, Slovenia

Clemens Neudecker
Berlin State Library

ocneudecker





Approach

- 3 languages selected for NER: Dutch, German, French – in collai
 with
- Content in these languages



Open resources

- European Newspapers NER dataset (CCO):
 - github.com/EuropeanaNewspapers/ner-corpora
- Europeana Newspapers NER software (EUPL):
 - <u>github.com/EuropeanaNewspapers/</u><u>europeananp-ner</u>
 - <u>github.com/EuropeanaNewspapers/</u>
 <u>europeananp-dbpedia-disambiguation</u>
- Annotated ALTO files:
 - lab.kbresearch.nl/static/html/eunews.html

Technical developments in progress

- Migration from The European Library portal to an Europeana collection (by the end of 2016)
 - Migrate content (images + full text, metadata) and software components to Europeana Cloud infrastructure
 - Publish a stable, production-ready newspapers API
 - IIIF compliant newspaper viewer



http://

acceptance.npc.eanadev.org/portal/en/collections/newspape



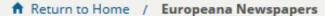
Collections ▼

Explore *

Exhibitions *

OUR SITES

LANGUAGE *







TÉLÉPHONE 103,04-103,05-103.06 Jules MADELINE, Président

LE PLUS GRAND TRANSATLANTIQUE DU MONDE

fait naufrage pour sa première traversée

BALLON PERDU EN MER

On espère encore que l'aéronaute

DEMAIN ÉCLIPSE DE SOLEIL

C'est la première et la dernière que pourront voir les Parisiens

> disque lunaire échancrera, pour la e fois, le bord éblouissant du soleil, ommenceront les différentes phases

Leloup a pu échapper à la mort **EUROPEANA NEWSPAPERS**

ges se firent en pleine nuit. ges se hrent en pieme nuit.

Tous les concurrents, à l'exception d'un seul, M. Jules Leloup, ont fait connaître à l'Aéro Club leur point d'atterrissage. L'aéronaute parisien n'a pas donné signe de vie, et fait plus grave, son ballon, le-Centaure, le même qui conduisit MM. Henry de La Vaulx et de Castillon de Saint-Victor au premier record de la distance en 1900, a été reen pleine mer, où le même jour un autre s'est perdu : le Fantasque, heur-tant un obstacle invisible dans la nuit, se délesta de ses passagers, dont M. Welby Jourdan, et s'élança au-dessus des flots.

C'est le vapeur norvégien Skraastad, nant de Newport, qui recueillit le-Cenlaure à moitié dégouffe, lundi à dix heures du ma-tin, à quinze milles au large des Sables-d'Olonne. Le ballon était légèrement endom-magé : le cerceau était brisé en un endroit, longtemps dans l'eau. Tous les objets em-portés par M. Jules Leloup étaient intacts ; dans la nacelle, il restait même vingt sacs de lest. Mais l'aéronaute, parti seul de Saint-Cloud, avait disparu.

: M. Georges Ravaine, parti quatrième, atterrit près des Sables-d'Olonne

ront demain ne pourra être observé que par nos petits-neveux.

La tigne de centralité, celle sur laquelle l'éclipse sera totale, coupe le nord du Portugat, le nord-ouest de l'Espagne, aborde ensuite la France près des Sables-d'Olonne et se dirige vers Paris, Liège, où l'éclipse de-viendra annulaire, pour continuer par Ham-bourg, la Baltique, Saint-Pétersbourg, et fi-nir dans la Russie d'Asie.

Aux environs de Paris, l'éclipse sera to-tale à midi 10 minutes aux Essarts-le-Roi, à Blancourt, Rennemoulin, Marly-le-Roi, Car-rières, Saint-Gratien, Argenteuil, Montmo-

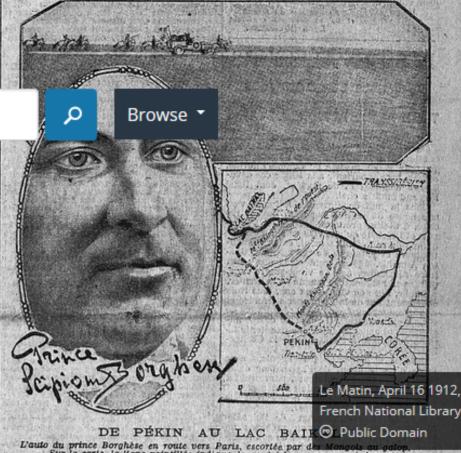
rency, etc.

Mais les heures indiquées pour la phase centrale varient suivant les diverses éphé

pouvoir observer la marche de les personnes n'ayant pas d'instruments d'optique devront se munir de verres enfumés, de verres noirs ou simplement de vieilles plaques photographiques voilées. Les observateurs munis d'une jumelle au Les observateurs munis d'une jumelle au-ront soin d'enfumer leur objectif ou de pla-cer des verres noirs devant les oculaires. On pourra suivre également l'éclipse en regardant le phénomène se mirer dans un

PÉKIN-PARIS EN AÉROPLANE

Passeront-ils par le désert de Gobi ou suivront-ils le Transsibérien?





Strategic developments in progress

- Establish an Editorial Board
- Hold a hackathon/transcribathon
- Virtual exhibition
- Promote and market the collection
- Make a sound forward planning
- ...and further planning ready in the next two months



Further into the future

- General functional development
 - ... of the newspapers API
 - ... of search and presentation
 - ... leveraging on the contributions from the IIIF comunity
- Establishing of a sustainable aggregation and publication processes



