# LINDAT / CLARIN DSpace Repository

History and state-of-the-art of CLARIN DSpace



https://github.com/ufal/clarin-dspace













### History



#### LINDAT dev team

- ? ? Petr Pajas
- 2011: Jozef Mišutka, Karel Vandas
- 2012: Jozef Mišutka, Amir Kamran, Bushra Jawaid, Michal Sedlák, Ondřej Košarko
- 2013: + Loganathan Ramasamy, -Bushra, +- Michal
- 2014: + Michal Josífko
- 2015-2016: Jozef, Amir, Ondřej

#### dspace versions

- started with dspace 1.6
- moved to 1.8.x in 2012
  - backporting interesting features from newer DSpace
- rebased on 5.x branch in 2015

#### tools

- vcs/issue tracker: svn/Trac, svn/Redmine, git/Redmine, git/github, git/github (proper fork)
- o CI: jenkins, selenium (for ui tests), now travis
- o apache -> nginx, tomcat (6,7,8)...

### DevOps



- automation via makefiles
- configuration files
- backups



### Handles

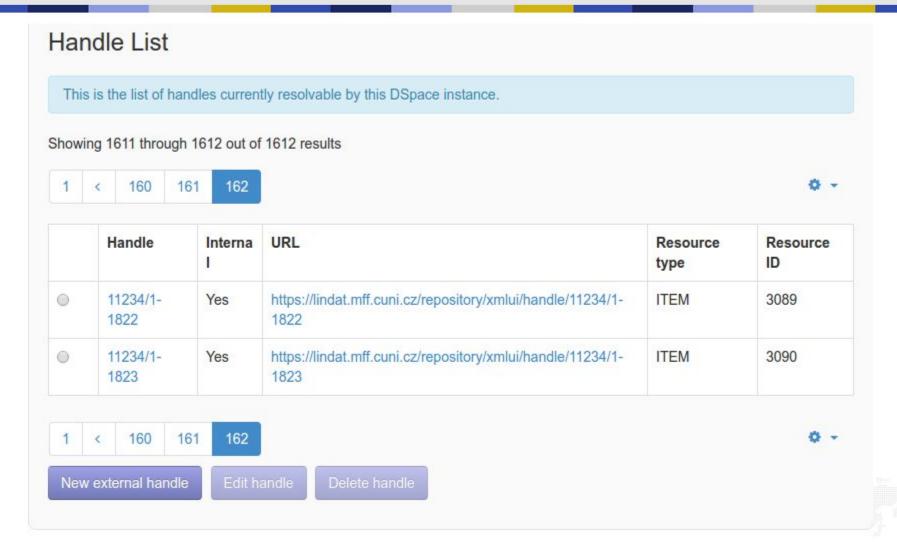


- epic api v1, v2
- per community prefix
- handle management
- (shortref.org support via dspace-rest)



#### List and edit handles





### Create new handle



#### New Handle







- import script
- metadata QA
- withdrawn (tombstone)

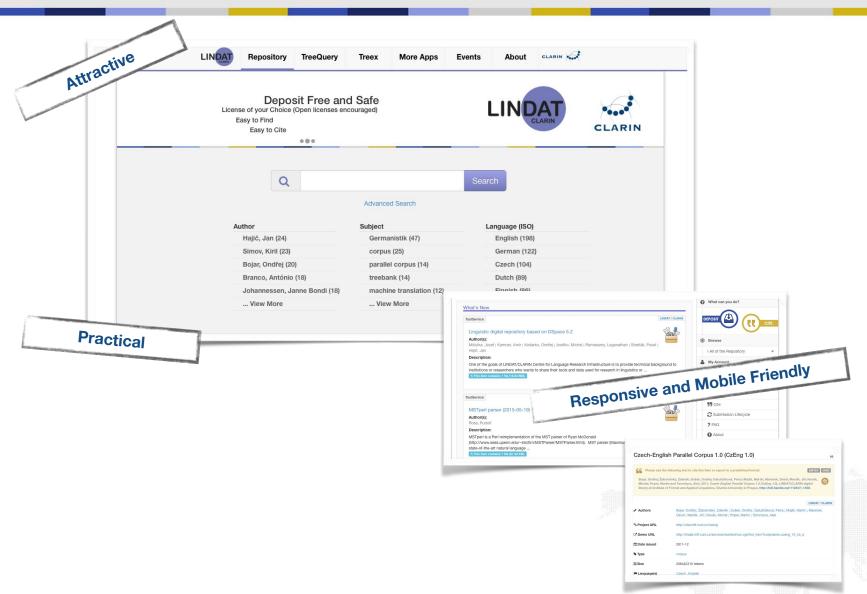


### U



- collections as metadata
- revamped mirage template
- responsive with bootstrap
- interfaces for new features
- submission (later)
- RefBox
- faceted search
- revived autocomplete
- download all zipped
- basic archive preview





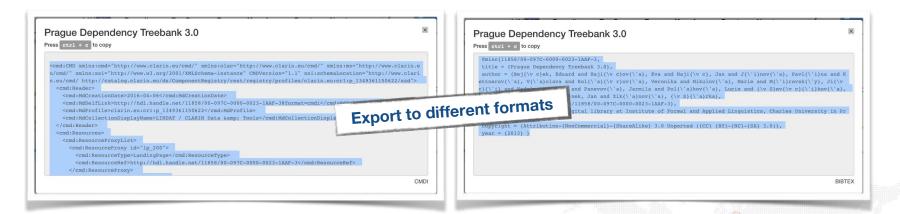
### **Easy to Cite**







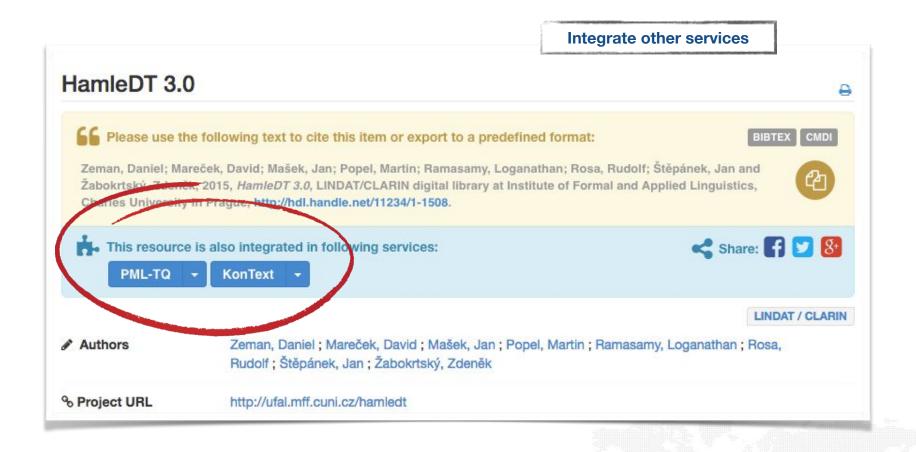
#### **Social Media Integration**





### **Easy to Integrate**

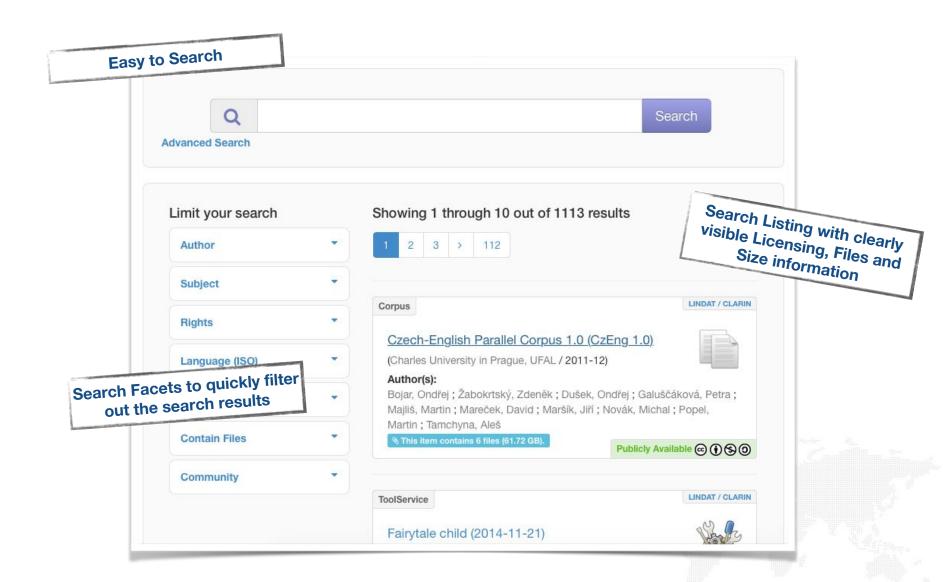




### **Easy to Find**

#### **Searching and Browsing**

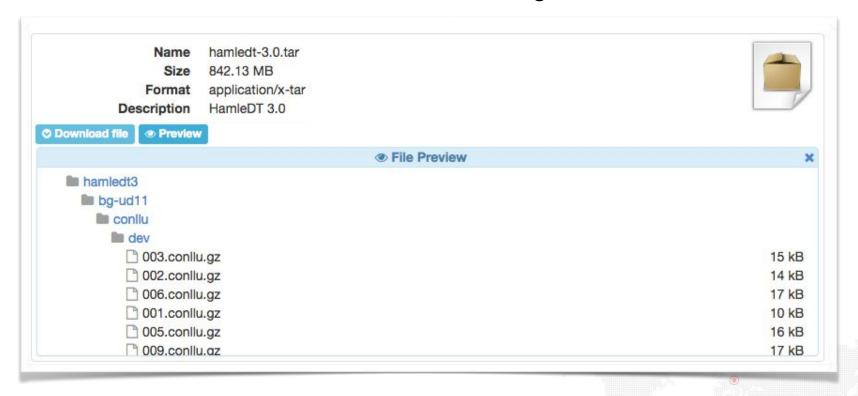




### **Bitstream Preview**



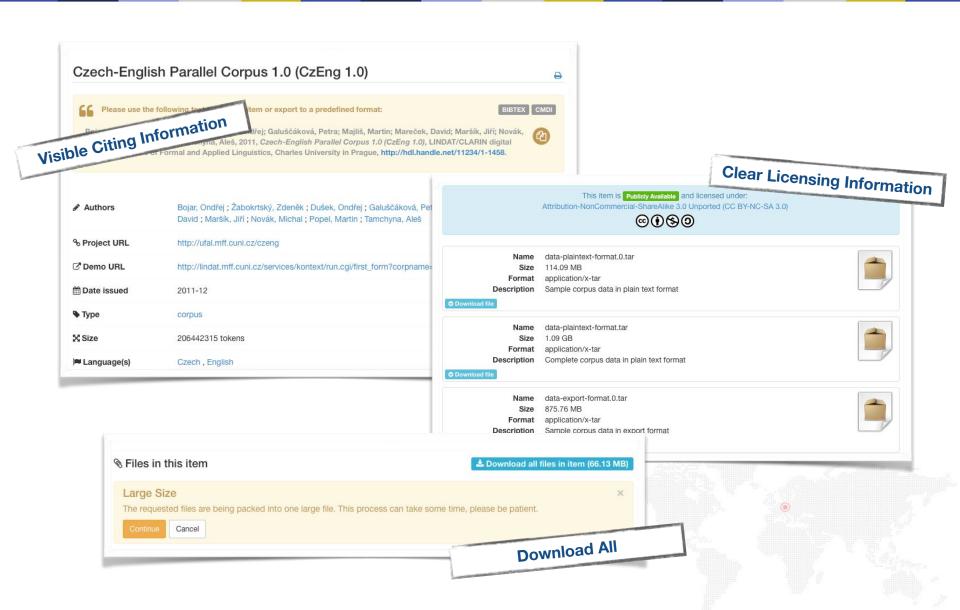
### Preview whats inside a zip archive or a text file without downloading



### **Easy to Retrieve**

#### **Item View and Bitstream Access**





### **Utilities**



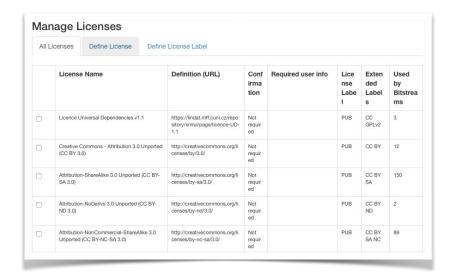
- used hibernate
- licensing framework
- subscription based monthly download/visit summary statistics for items in pdf format



### **Easy to Distribute**

#### **Licensing Framework**





With our Licensing Framework it is easy to add new licenses.

Licenses have labels **PUB** (public), **RES** (restricted), **ACA** (academic). The labels decides the access mechanism of the licenses resources e.g. for PUB label licenses the user is not required to login.

It is also possible to force the user to sign the license, with options like sign only once or always.

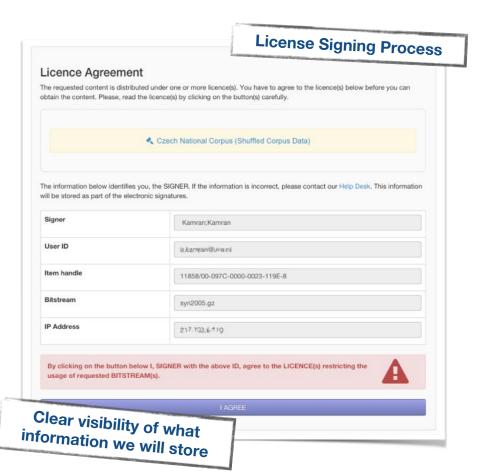
Licenses can be configured to ask users **extra information** on signing.

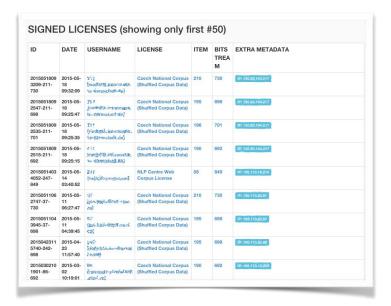
All Licenses	Define License	Define License Label	
Define new lice	nce		
License name			
License definition URL			
License requires confirmation		Not required	*
License Labels		Publicly Available (PUB) Academic Use (ACA) Restricted Use (RES)	
License Labels		Attribution Required (BY) Share Alike (SA) Noncommercial (NC) Redeposit Modified (ReD) No Derivative Works (ND) Inform Before Use (Inf) Distributed under Creative Commons (CC) No Copyright (ZERO) GNU General Public License, version 3.0 (GPLv3) GNU General Public License, version 2.0 (GPLv2) BSD (BSD)	

### **Easy to Distribute**

#### **Licensing Framework**



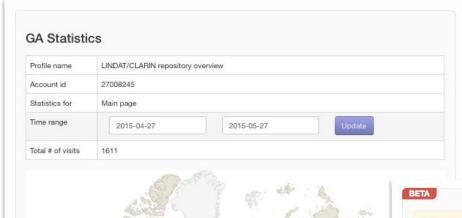




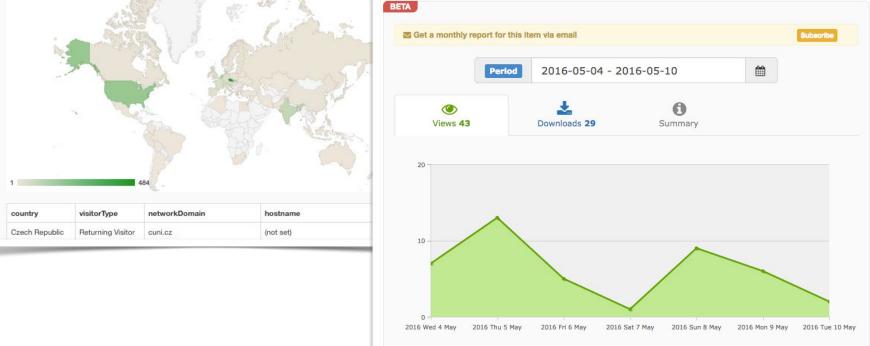
In Control Panel the administrators can view details of signed-licenses.

### **Statistics**





- Google Analytics
- PIWIK Integration



### **Monthly PIWIK Reports**



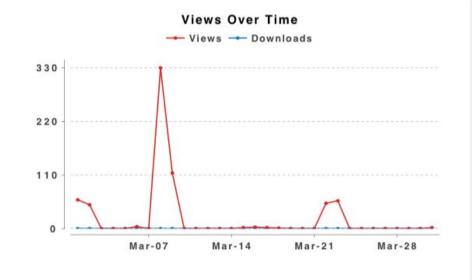
#### **Monthly Item Statistics**

Mar, 2015



#### Testing branding metadata value 2

http://hdl.handle.net/11858/1458



#### **Visitors By Country**

Slovakia

Netherlands Czech Republic 2

Summary

675 pageviews, 101 unique pageviews

48 visits, 21 unique visitors

0 downloads, 0 unique downloads



- Control panel custom tabs (present in DSpace 6)
  - settings/commands/logs/metadata qa/b2safe backup
- healthcheck (present in DSpace 6)
- curation tasks
  - also on workflow (editor) items
- exception emails

### **Control Panel**



#### **Control Panel**

 Java Information
 Extra Java Info
 Configuration
 Extra Configuration
 SystemWide Alerts
 Programs
 PID

 Shibboleth
 Backup
 IRODs Replication
 Cron Jobs
 OAIPMH Validators
 Harvesting
 Release Notes

Statistics Licenses Signed Licenses Current Activity Checks Verify Logging Dspace Log(s)

User Logins Shib Raw Logins Unpublished Items Bitstream items Specific Metadata Metadata Quality

Embargoed items Oldest users

#### Java and Operating System

Java Runtime Environment Version:

Java Runtime Environment Vendor:

Java HotSpot(TM) 64-Bit Server VM

Operating System Name:

Linux

Operating System Architecture:

amd64

Operating System Version:

2.6.32-19-pve

### **Control Panel**



#### **Verify Logging**

- Logging to /opt/lindat-dspace/installation/log/dspace.log.2016-05-10 OK.
- Logging to /opt/lindat-dspace/installation/log/resources.log.2016-05-10 OK.
- Logging to /opt/lindat-dspace/installation/log/curator.log.2016-05-10 OK.
- Logging to /opt/lindat-dspace/installation/log/checker.log.2016-05-10 OK.
- Logging to /opt/lindat-dspace/installation/log/dspace.u
- Logging to /opt/lindat-dspace/installation/log/utilities.lc
- Logging to /opt/lindat-dspace/installation/log/dspace.u
- Logging to /opt/lindat-dspace/installation/log/cocoon.le
- Logging to /opt/lindat-dspace/installation/log/authentic

#### Monitor errors in real time

Choose different file ▼

A File:	[dspace.log.2016-05-10]	Warnings/Errors:	[2]
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Exception at line:	Content
1821	2016-05-10 02:25:05,609 ERROR org.dspace.app.xmlui.aspect.discovery.AbstractSearch @ can not sort on multivalued field: dc.date.issued org.dspace.discovery.SearchServiceException: can not sort on multivalued field: dc.date.issued at org.dspace.discovery.SolrServiceImpl.search(SolrServiceImpl.java:1643)
3187	2016-05-10 03:50:10,868 ERROR org.hibernate.engine.jdbc.spi.SqlExceptionHelper @ ERROR: canceling statement due to statement timeout

- File: [dspace.ufal.metashare-schema-errors.log.2016-05-10] Warnings/Errors: [0]
- File: [curator.log.2016-05-10] Warnings/Errors: [0]
- A File: [solr.log.2016-05-10] Warnings/Errors: [1]

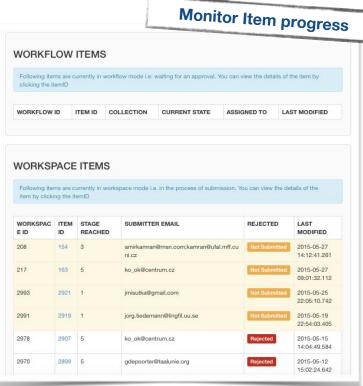
### **Control Panel**







View all bitstreams in the repository



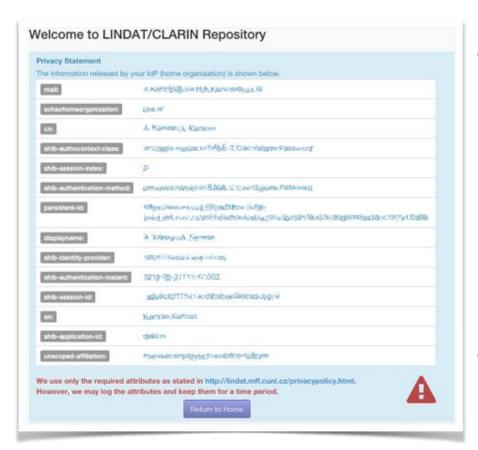


- refactored shibboleth
  - e.g. possibility to fill email if not in attributes
- CoCo welcome message
- (discojuice)
- spinoff projects
  - log parser
  - idp QA checker
  - attribute aggregator

#### **Data Protection**

#### **Authentication and Authorization Infrastructure (AAI)**





- We have implemented GÉANT Data
   Protection Code of Conduct
   (DP-CoC) that requires proclamation from the SP to not misuse released attributes. The Data protection Code of Conduct describes an approach to meet the requirements of the EU Data Protection Directive in federated identity management.
- At first sign in, we present to the End User a Privacy Statement about released information from the IdP.

#### Submission



- tweaking the workflow
  - required fields
  - pages
  - comments/hints
- input-forms
  - localization
  - acl for fields
  - regexps
- file uploads
  - d'n'd + multiple files
  - admin uploads (no size limits)
- "sharing" submissions

### **Shareable Workflow**



# Work collaboratively - pass submission to another user



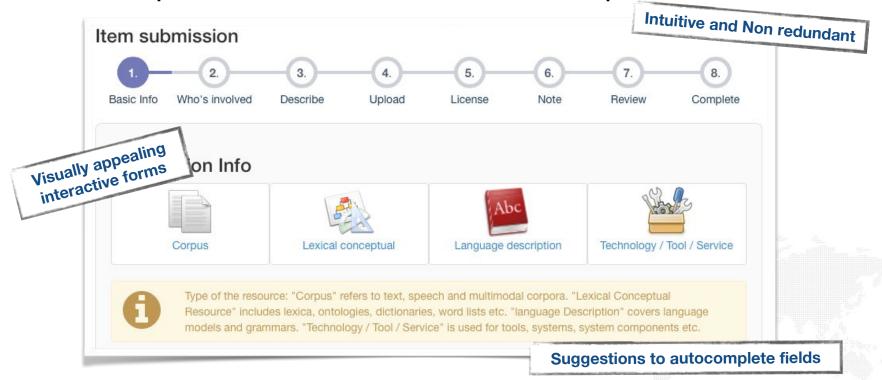
#### Share link

To pass your submission to another user give them the following link: https://lindat.mff.cuni.cz/repository/xmlui/submit?workspaceID=3037&share\_token=b8847556e4df6e9d464a1aead59e47b3. You will also receive an email with this link.

### **Easy to Deposit**

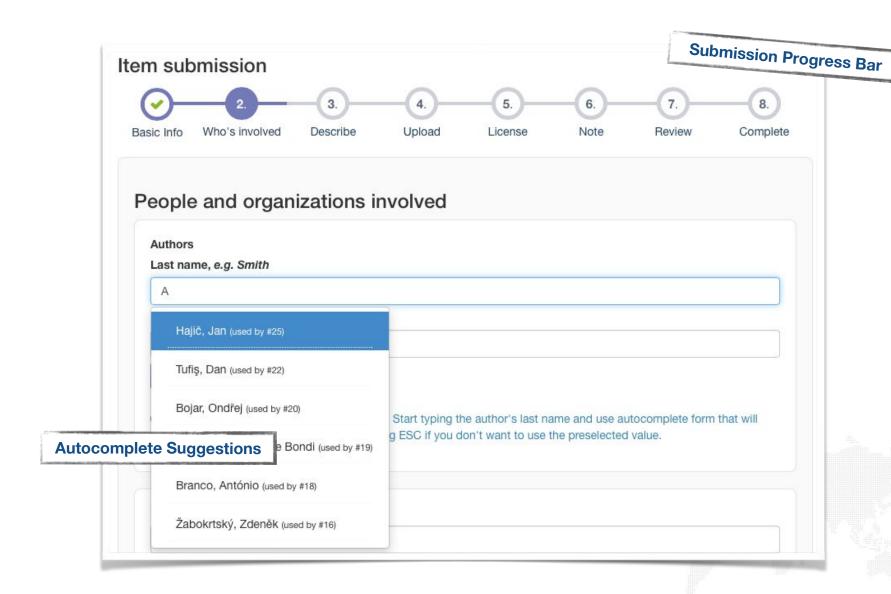


- The DSpace submission process consists of a series of "steps", where each "step" corresponds to one or more UI pages.
- We have carefully designed the steps to make sure that a submitter provides as much metadata as possible.



### **Auto Complete**



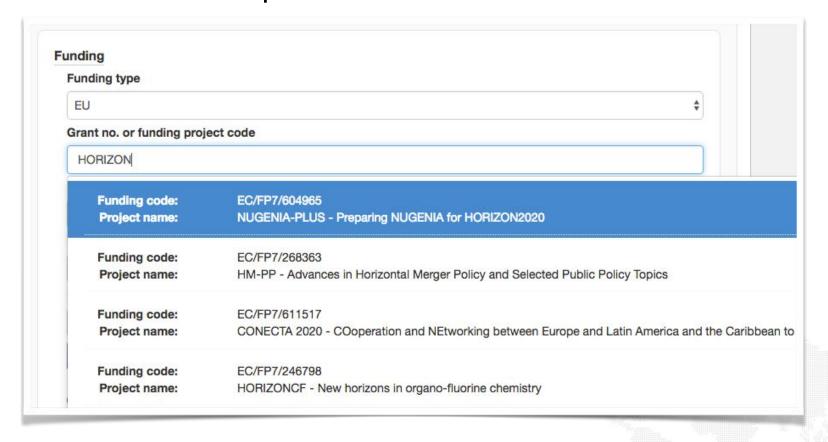


### **OpenAIRE Integration**

#### **Submission Process**

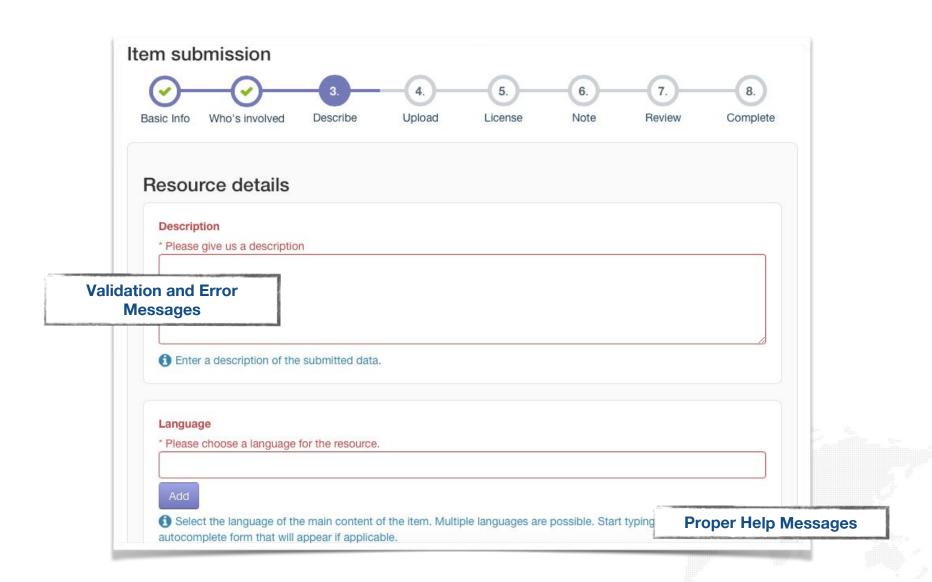


 OpenAIRE is a platform for accessing open repositories with research outputs and evaluation.



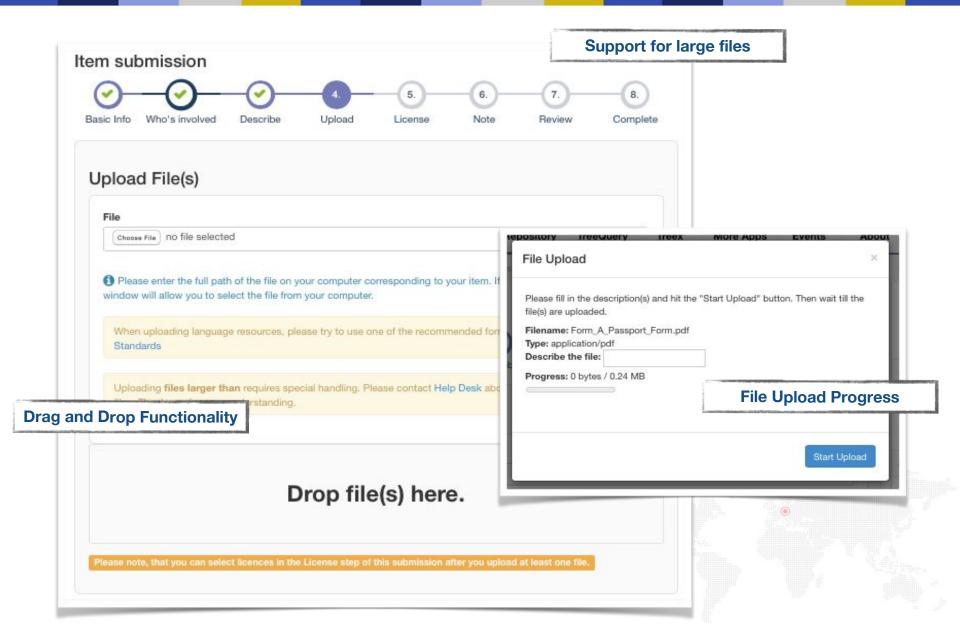
### Validation and Help





### File Upload

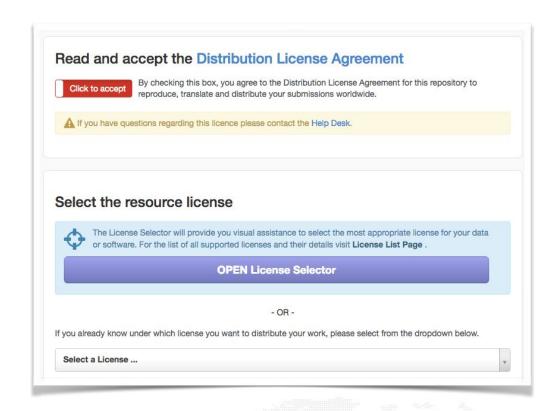




### Licensing



- The License Step is one of the most critical one.
- Clear and visible Distribution
   License Agreement, we want to
   make sure that the use is fully
   aware of how the deposited
   resources will be distributed by
   the repository.
- The user must also select the Resource License under which the resources will be distributed. We support major licenses and with our advance licensing framework, it is easy to add new licenses with labels and extra metadata.

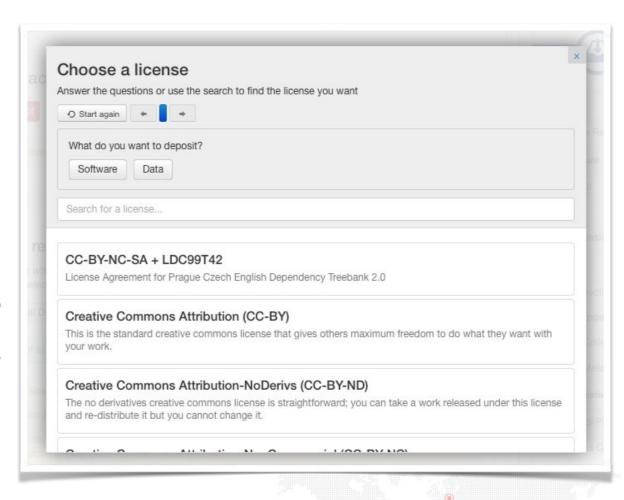


## **Licensing**Submission Process



To make sure that the submitter choose the correct license, we develop a **License Selector** tool.

A simple question/answer screen will guide the user to decide which license is most appropriate for his/her requirements.





#### Metadata



- unified metadata profile
- reasonable set for various harvesters
- cmdi output
  - "hardcoded" profile
  - uploaded file
- OpenAIRE Data Archives
- "technical" metadata
  - provenance tracks changes, files counts/branding

### Versioning



- versions vs revisions
- different meaning than dspace
  - different PID
  - copy of submission
- replaces/replaced by



### Replaceable



Acknowledgement Ministerstvo školství, mládeže a tělovýchovy České republiky

Project code: MSM 0021620825

Project name: Jazyk jako lidská činnost, její produkt a faktor

Univerzita Karlova v Praze

Project code: P10 - Lingvistika

Project name: Program rozvoje vědních oblastí na Univerzitě Karlově P10 - Lingvistika, modul Osvojování

a vývoj jazykové a komunikační kompetence u populace ČR, řešeno od r. 2012

Subject(s)

youth language

classroom

language acquisition corpus

AKCES



This item is replaced by a newer submission: http://hdl.handle.net/11858/00-097C-0000-0023-3FBB-3

Please refer to the submission above for the latest available data. If you nevertheless need the original data, please click here.



- DSpace code not performing well on big files
- Tomcat not suitable for big file downloads
- avoid Tomcat for publicly available files
  - real path in metadata
  - careful because of statistics

#### **Documentation**



- external (github wiki)
- internal (static repository pages)
  - user documentation
  - policies
  - processess



### Contributing



- issue reports
- bug fixes
- features
- DSpace (upstream)
  - xoai
  - nginx-shib/nginx-http-shibboleth,
  - openresty/headers-more-nginx-module
- our code on github
- presenting at Open Repositories conference