

From DSpace to Islandora: why and how

Short introduction

DSpace and Islandora

- Systems for building repositories and/or digital libraries
- Intended to store and describe digital content – digital objects
- Provide services (browse, search, retrieve, ...)
- Interoperability support (OAI-PMH, ...)



A bit of a history I

- Investigation of DL systems started at about 2003/2004
 - Fedora, ePrints, Greenstone, CDSware, R.I.B. and DSpace
- Needed(?) out-of-the-box solution for a university repository => DSpace won
 - Java, growing community, well defined workflows etc.
- 2005: we were asked by the czech mathematicians to help to build up Czech Digital Mathematics Library (a national project)
 - With the perspective to join the European Digital Mathematics Library project



A bit of a history II

- We quickly found that DSpace is not enough for pre-processing:
 - Historical materials needed to be scanned (incl. OCR), completed and described
 - DSpace workflow system is intended for self-archiving of born-digital stuff
- **Metadata Editor** was developed from scratch (based on Ruby)
- **DSpace** as a platform for providing the content together with services to end users
 - DSpace Java API used to import content from ME
 - DSpace XMLUI high flexible interface used to develop necessary (many) customizations
 - *Check the references on the last slide for details*
- **DSpace** as a connection point to EuDML (via OAI-PMH)

<https://dml.cz/>

A bit of a history III

- Later on we used the same schema for dedicated digital libraries at the university:
 - Digital Library of the Faculty of Arts
 - Digital Library of the Faculty of Law
- All of them need to be customized (both DSpace and ME)
 - Because **we want them to have added value** for users/community
- ... time for maintenance and upgrades was still increasing
 - While the IT stuff not
- Especially ME got outdated because of Ruby versions incompatibility
 - However, DSpace is quite fine with Java

Situation summary



- ME as an inhouse developed system is very expensive
 - And we don't have enough capacity to develop a new one
- DSpace has to be customized
 - DSpace is intended to be more like a self-archiving institution repository
 - A lot of features need to be developed (expensive) and consequently upgrades are expensive
- DSpace 7 release: a new UI not compatible with previous one
 - Most of our customizations need to be rewritten
- Let's try to look around if there's something to suit our needs better
 - Samvera and Hydra: very small community, lack of support (4 years ago)
- **Islandora** looks promising... Why? *See next slides.*

DSpace and Islandora: architecture



- Java based monolithic system developed from scratch
- Distributed as a compact open-source package
- Intended to be self-archiving institution repository
=> larger customizations allowed but not primarily supported



- A compilation of cooperating subsystems based on different technologies
 - *Drupal, Fedora, SOLR, ...*
- Very good support for doing large UI customizations easily because of Drupal

DSpace and Islandora: philosophy

- **DSpace** is fully ready to do certain things and you must follow the prepared schema
 - Must use Communities and Collections to organize content (fixed content types)
 - Have to use ingest workflow schema

If you want it as it is, you're very happy,
... because DSpace and its features are perfectly ready for you.

- **Islandora** does not want you to follow certain workflow
 - You can use prepared schema like Repository item (= digital object), but you **don't have to**
 - You can use full power of Drupal (own content types, own UI, ...), but you **don't have to**

If you want to customize it, you're very happy,
... but there are few nice features missing.

DSpace and Islandora: features examples

- DSpace has a perfect ingest workflow system, including supervising and collaborative features
 - However, once published item cannot be returned to the workflow system in DSpace
 - There's a support in Islandora, but not so rich
- DSpace has perfect authorization support, Islandora does not
 - You can set up authorization support in Islandora, but it's not straightforward
- DSpace metadata are flat *key:value*, Islandora can use complex metadata types
 - You can't have separate fields for name and surname in DSpace
- OAI-PMH support is much better in DSpace
- Handle.net supported by default in DSpace, Islandora DIY

DSpace and Islandora: maintenance

- **DSpace** is more consolidate out-of-the box solution: one package = one version = one GIT repository => robust
- DSpace has larger community
- Perfect documentation

- **Islandora** is more fragmented to various packages spread around various GIT repos
 - Technically Islandora is just a Drupal module + a few backend packages and configurations that makes them to work together
- Two major versions (7, 8), several installation options
- Islandora community is smaller, but very supportive
- Documentation not so perfect

DSpace and Islandora: summary

- Both systems are good and do the job
- DSpace is more specialized
- Islandora is more customizable and DIY
 - Many customizations done via configurations => easy to upgrade
- Since we want to build up more specialized customized digital libraries with added value, Islandora is a better option for us
- **Islandora has proved to be more effective for our needs**
 - But good knowledge of Drupal necessary
 - Drupal is very popular => Drupal modules are treasure :-)
 - Drupal is very popular => need to be careful about security :-)

DSpace to Islandora migration

- No one-click automatized migration support both data and features
- Especially for features there are no general rules/advice
- Data migration: semi-automatic
 - DSpace: export CSV
 - Drupal/Islandora: configure migration (import) and run it
- Features migration: by hand
 - Many general features are available by default in Islandora
 - Customized features need to be done by hand
- Yes, it's not for free

Islandora: what we have done so far

- Support from LINDAT/CLARIAH-CZ EU project on digital humanities
- We have built up few digital libraries on top of Islandora
 - Standard documents (PDFs: articles, chapters, books)
 - Archeological artefacts (images, 3D models, rich metadata)
 - Historical cinematic database (including interactive map)
 - Database of beauty patterns (will be released)
- See our infrastructure overview page:

<https://digitalia.phil.muni.cz/en>



Our team (project head, developers, data curator) is here and ready for questions and discussions.

Involved platforms

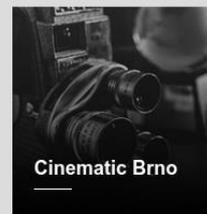
We present a list of individual platforms involved in the Digitalia MUNI ARTS infrastructure. By joining the infrastructure, long-term protection and quality care of the contained data is ensured. Links to other faculty platforms can be found in a [separate catalogue](#).



The aim of the project is to make the extensive work of Arne Novák accessible. The collection includes digitized materials from the Central Library of the FF MU.



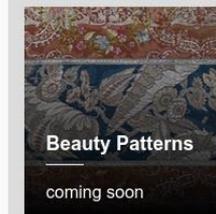
The factographic database provides access to archaeological data and visualisations of Early Bronze Age arrowheads from Moravian and Slovak sites.



The database contains information about individual cinemas, their programmes and films shown in Brno in 1918–1945.



The digital library contains freely available full texts of journals, monographs and proceedings published at the Faculty of Arts of Masaryk University.



The image database offers several hundred samples of liturgical vestments and other ceremonial fabrics, mostly from the 18th century.

References

- Building the Czech Digital Mathematics Library upon DSpace system <https://dml.cz/handle/10338.dmlcz/702539>
- DML-CZ Metadata Editor <https://dml.cz/handle/10338.dmlcz/702537>
- Digitalia <https://digitalia.phil.muni.cz/en>
- Digital Library of the Faculty of Arts <https://digilib.phil.muni.cz/>
- Digital Library of the Faculty of Law <https://digi.law.muni.cz/>
- Arne Novák Digital Library <https://arne-novak.phil.muni.cz/?language=en>
- Projectiles <https://projectiles.phil.muni.cz/>
- Cinematic Brno <https://cinematicbrno.phil.muni.cz/>