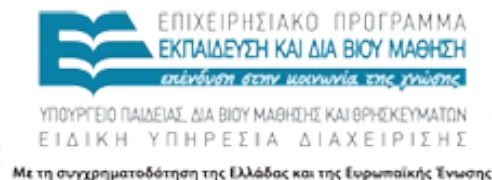


A funder repository of heterogeneous grey literature material with advanced user interface and presentation features

Ioanna-Ourania Stathopoulou, Nikos Houssos, **Panagiotis Stathopoulos**,
Despina Hardouveli, Alexandra Roubani, Ioanna Sarantopoulou, Alexandros
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Agenda

- Aims and scope of the project
- Methodology and approach
- Implementation
- Conclusions – future work

The National Documentation Centre (EKT)

- The national organisation in Greece:
 - for scientific documentation, online information and support services on research, science and technology
 - Objective: **making knowledge accessible to everyone**
- Incorporated in National Hellenic Research Foundation (NHRF)
- Implements the “National Information System for Research and Technology”: <http://epset.gr>
 - CRIS systems, Digital Repositories, e-Publishing, Digital Libraries, Interactive Culture, and more...
 - Open Access advocate: <http://openaccess.gr>, OPENAIRE, OPENAIRE+ member and NOAD.
 - Greek PhD theses archive: <http://phdtheses.ekt.gr>

Project context

- Hellenic Ministry of Education programmes for education and lifelong learning, co-funded by the EU structural funds
 - Three phases: 1994-1999, 2000-2006, 2007-2013
 - Overall funds in the range of billion Euros
- Activities funded:
 - Research: theses, collaborative projects
 - Studies, surveys, reports, project public deliverables
 - Conferences, workshops
 - Face-to-face courses / seminars
 - Creation of educational material
- Most of them fall into the realm of “grey literature”

Aims and scope of the project

- Decision by funding authority to create a repository (autumn 2010)
- Aims: Dissemination, reuse and preservation of the digital material produced in the frame of the funded programmes
 - Single point of (persistent) access to material
 - Standards-based documentation/metadata, interoperability
 - Link of content to project / funding programme (by an external CRIS system)
- Repository available (since spring 2011)
 - <http://repository.edulll.gr>

Motivation

- For the general public:
 - Dissemination of the material to interested users
 - Reuse material for education, innovation, etc.
- For government organisations:
 - Increased transparency regarding where public funding goes - reporting on contracts awards for studies to specific individuals and organisations
 - Avoid allocation of funding for work already done in the past

Project inputs and outputs

- Input material:
 - Digital files arranged in folders – (hopefully) according to project
 - List of projects
 - No metadata!
- Output aimed for:
 - Repository with standards compliant metadata records along with processed digital files, suitable for dissemination
 - Internal lightweight CRIS system combining digital items with project information and metadata
 - User-friendly interface for human users
 - Programmatic interface (OAI-PMH) for reuse by third-party software applications

Methodology and approach

- Investigate input material
 - Identify content of archival value – exclude all other material (e.g. administrative documents)
 - Assign priorities to content
- Documentation / cataloguing of material according to standards – application profile created
 - Subject cataloguing
 - No self-archiving at this phase
- Digital processing of input files to produce copies suitable for preservation and dissemination – both initial and processed files kept in repository
- A lot of effort allocated to user-friendly interfaces for browsing metadata and accessing content

Metadata schema

- Custom application profile developed based on common international schemata
 - Qualified Dublin Core
 - LOM
 - PREMIS
 - CERIF
- Vocabularies used
 - Eurovoc for thematic indexing – due to inter-disciplinarity and multi-linguality
 - Eurydice vocabulary for education levels

CERIF/CRIS functionality

- A separate CERIF/CRIS has been developed running as a separate system than the repository
- Represents in CERIF project, funding, organisation metadata and links with output
- Structured representation, clear semantics using the CERIF Semantic Layer
- Currently used as a private system – no public access

Linking CRIS and Repository

Complex links / roles

Reporting

Evaluation



Funder Repository

Persistent ids to docs
Content presentation

Rights

Access statistics

Example links / roles

Organisation - Project:

Funder / Supervisor / Contractor

Person - Project:

Coordinator

Team leader

Team member

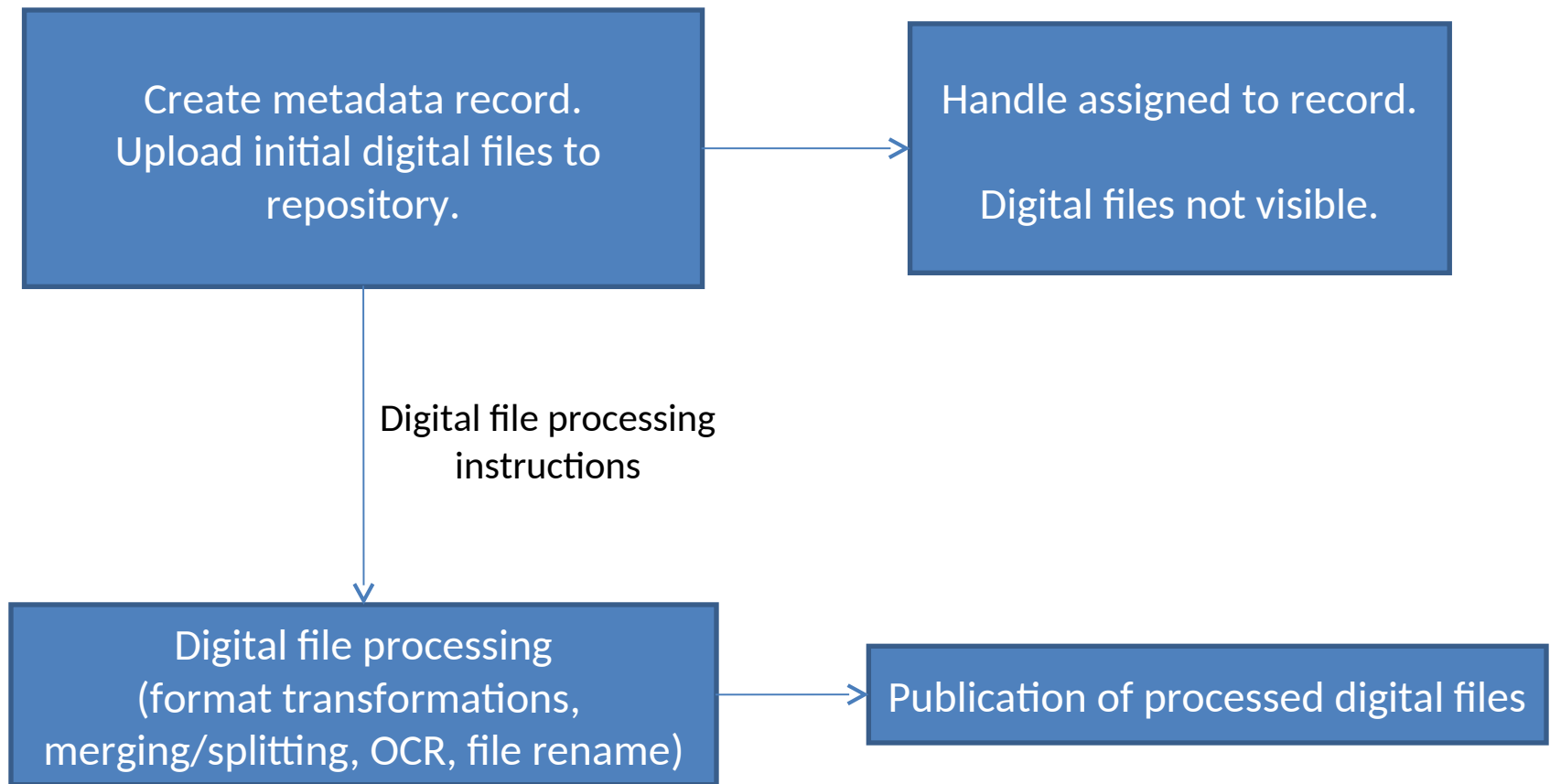
Evaluation

Current status:

Lightweight CERIF based CRIS for internal use

GL14 - "Tracking Innovation through Grey Literature", Rome, 29-30 November 2012

Repository Digital items workflow



Repository s/w extensions

- DSpace based with extensions:
 - Submission form enhancements
 - User-friendly browsing (tagcloud, image-based type browsing)
 - Embedding of video files
 - Online reading / streaming of text material
- To be included in Dspace 3.0
 - DSpace Testathon 3.0 (round 2)
 - <https://jira.duraspace.org/browse/DS-1225>
 - <https://jira.duraspace.org/browse/DS-1231>
 - <https://jira.duraspace.org/browse/DS-1227>

Submission form enhancements

- Simplify procedure, fewer steps
- Enter metadata and upload multiple files from single form
- Subsequently edit metadata from submission form
- Multi-lingual controlled vocabularies with user-friendly values
- Various new widgets (e.g. language selection for fields, name processing)

User-friendly browsing

- Tag cloud for subjects
- Configurable from dspace.dfg – can be used for any other field indexed for browsing
- Image-based browsing for content types

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Επιχειρησιακό Πρόγραμμα «Εκπαίδευση & Διά Βίου Μάθηση»



Ευρωπαϊκή Ένωση
Ευρωπαϊκό Κοινωνικό Ταμείο



Με τη συγχρηματοδότηση της Ελλάδας και της Ευρωπαϊκής Ένωσης



ΕΣΠΑ
2007-2013
Πρόγραμμα για την ανάπτυξη
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σύστημα Εκπαιδευτικό υλικό Εκπαιδευτικός Επαγγελματικά

προσόντα Επαγγελματική εκπαίδευση Επαγγελματικός προσανατολισμός/

συμβουλευτική Επιχειρηματικό πνεύμα Εφαρμοσμένη πληροφορική Ισότητα των

φύλων Ιστορία Καθυστέρηση στα μαθήματα Κοινωνική ενσωμάτωση

Κοινωνικοοικονομικές συνθήκες Κοινωνικός αποκλεισμός Λογισμικό Λόγος

Μαθητής Μέθοδος αξιολόγησης Μετανάστες - κοινωνική ένταξη Μετανάστευση

Μητρική γλώσσα Νέες τεχνολογίες Νηπιαγωγείο Ξένες γλώσσες - διδασκαλία Ξένη

γλώσσα Οικογένεια Οργάνωση της εκπαίδευσης Παιδαγωγική μέθοδος

Περιβαλλοντική εκπαίδευση Περιβαλλοντική πολιτική Πληροφορική Πρόγραμμα

διδασκαλίας Πρόσβαση στην αγορά εργασίας Πρόσβαση στην εκπαίδευση

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EKTΕΘΝΙΚΟ ΚΕΝΤΡΟ ΤΕΚΜΗΡΙΩΣΗΣ

The Digital Library has been implemented by the National Documentation Centre (EKT) through the Operational Programme "Education and Lifelong Learning", co-

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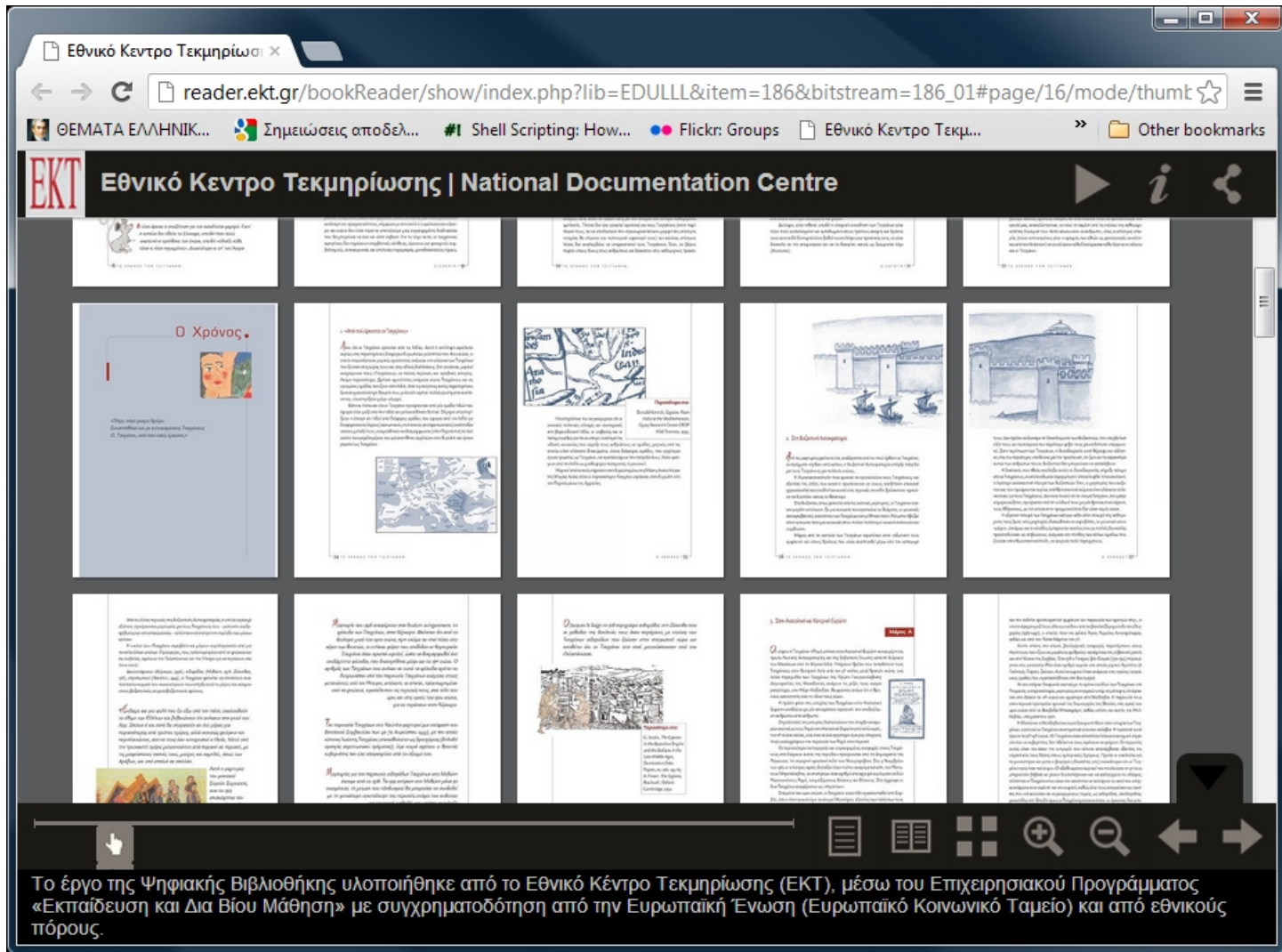
Embedding video files

- H.264 encoding using a F4V video file container
- Video stream provided by Woowza
- Flowplayer selected from embedding video on metadata record page on repository
- Video-related fields included to the metadata submission/edit form

Online reader for text

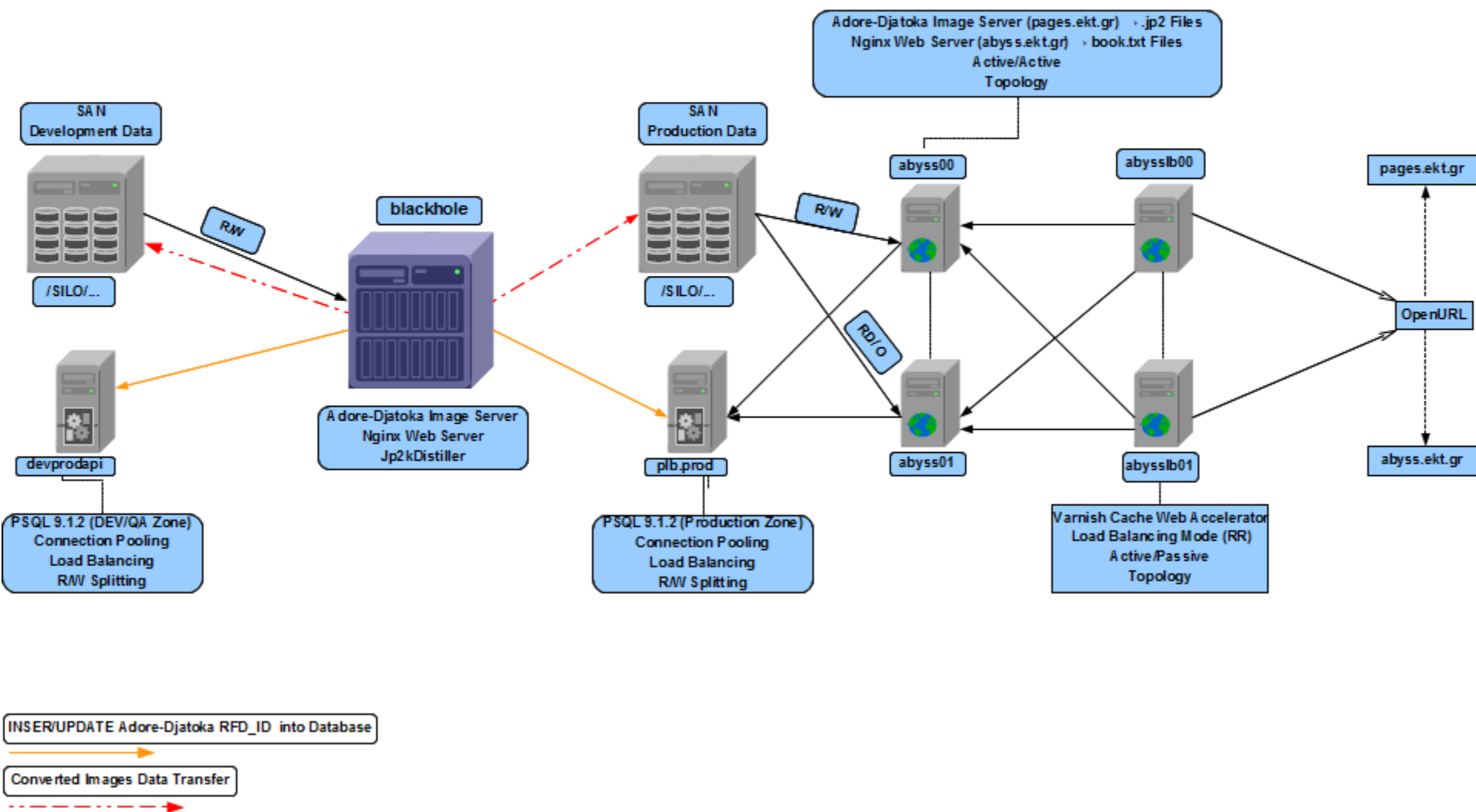
- No need to download big files
- Bookmarking/sharing at the page level
- User access statistics at the page level
- Compatible with multitouch interfaces / tablets
- Based on the Internet Archive Book Reader
- Pages are JPEG2000 files served by an image server
- Sophisticated infrastructure for back-end processing

Online reader (screenshot)



Online reader backend

- Two-tier backend:
 - content delivery and
 - content transformation
- Content delivery:
 - Nginx/Varnish load balancer/caching to 2 node tomcat/djatoika cluster serving JPEG2000 over a shared SAN storage and utilising a 3 node Postgres 9 cluster
- Content transformation
 - “Shadow” backend with specialized multithreaded content types transformation server
 - After transformation content copied to the delivery backend
 - Interfaced to OJS/Dspace
 - Manages the automatic batch conversion of content
 - Available as OSS (jp2k-distiller) <http://code.google.com/p/jp2k-distiller/>



Future work

- Support self-archiving (two phase cataloguing)
- Integrate CERIF/CRIS functionality to the publicly available main system
- Various new features for presentation of content

Thank you for your attention!

- More info:

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nhoussos@ekt.gr

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