Ph.D. Theses Mass Digitization at ULB

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ULB UNIVERSITÉ LIBRE DE BRUXELLES

Abstract

In 2012, our library initiated a mass-digitization project of all the Ph.D. theses produced at the university since its creation in 1834.
The goal of the project was twofold: improving the visibility and accessibility of our scientific research and freeing space for the development of our learning centers. Over 10000 volumes and 3 million pages needed to be digitized.

To Outsource or Not to Outsource? That Is the Question.

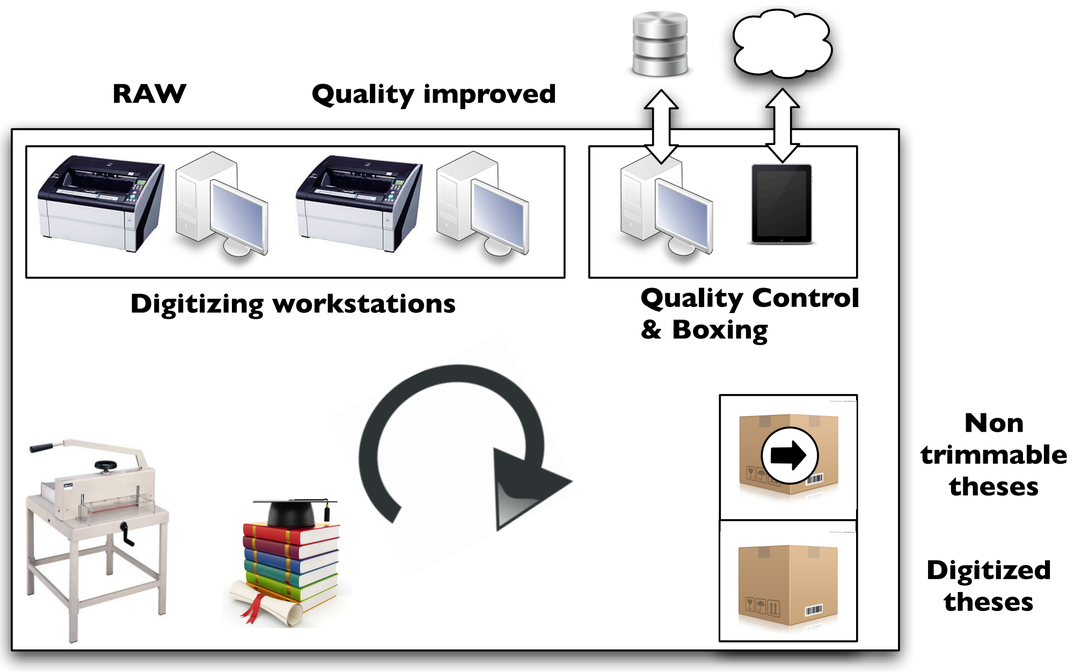
We decided to insource this mass digitization project.

- total control of the production
- less expensive
- once in place, the workflow can be reused

- extra human resources needed
- longer time to start
- taking full responsibility

We developed a custom-designed digitizing workflow

After trimming the book binding of incoming theses, each volume is duplex-scanned twice. Quality control is then performed with the original in hand. The paper volume is finally boxed for storage using a custom cloud application.



Automated & manual cross-checks ensure low error risk

automatic filenaming with QR code generated from our catalog

duplex scanning even for simplex print

both raw and automatic quality improved images

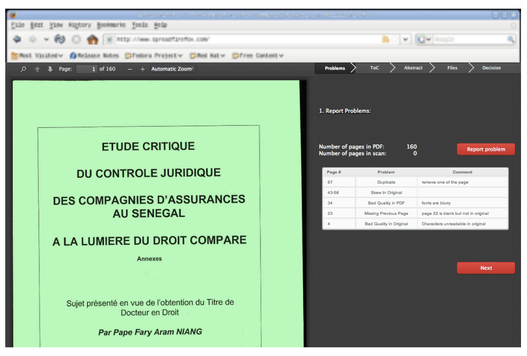
double scan with iMFF: portrait and landscape

4 page count verifications

software-assisted quality control

Quality Assurance is supported by custom software

Quality control is always performed with the original in hand. The client-server application allows the operator to report quality issues both in the digitized object and in the original paper object.



client server

HTML CSS PDF.JS JavaScript node.js

Digitizing has two aims: dissemination and preservation

Digitization

Dissemination
(mixed-raster content
ABBYY OCR PDF, ALTO, txt)

Preservation
(JPEG 2000)

Thesis representations in our institutional repository

The submission representation of the thesis (TIFF files) is automatically transformed into an archival representation (JPEG 2000 files), from which various dissemination representations are generated (PDF, ALTO, txt).

These representations are referenced in our institutional repository using a custom-designed METS profile.

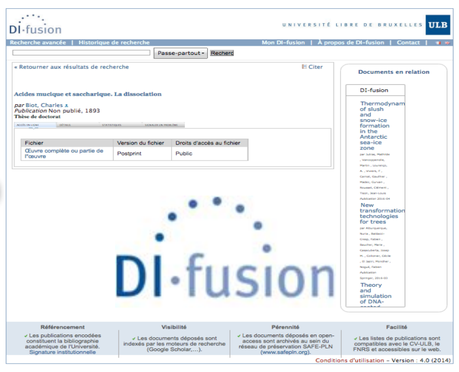
DI·fusion DSPACE institutional repository ← SIP scanned thesis

Thesis Representations (METS)

Submission Representation
Archival Representation → AIP
Dissemination Representations → DIP

Digitized theses are preserved in SAFE PLN

The SAFE Private LOCKSS Network is an international distributed preservation repository based on the LOCKSS technology operated by seven universities.



institutional repository

Each collection of archives is automatically replicated in every box constituting the network, thus ensuring a broad geographical data redundancy.

Automatic data integrity monitoring and comparison is performed regularly through the network via secured connections. Bit-rot and other forms of data corruption can thus be quickly detected, reported and corrected.

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