Scaling down: IIIF at small scale

Presenting personal collections using IIIF

Christian Mahnke, June 24th, 2021

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About me

- ☞ Collector of printed materials…
  - ☞ Books, magazines, postcards
- ☞ …from different fields
  - ☞ Art, architecture, fashion, (interior) design, children's books, printed patterns, type faces and many more
- ☞ Professional background in digital libraries (15+ years)

About my projects

- Spring 2020: "Stay at home"
- Catalogued my books
  - Digitized some material using a mobile phone and rescanned everything later on…

Technical requirements

Very high level

- Must have
  - Low cost (only domain names and maybe storage)
  - Offline generation of derivates, manifests and site (HTML)
- Should have
  - Workflow automation / integration of own scripts
  - Version Management
  - HTTPS

Infrastructure

- GitHub
  - GitHub Actions
  - GitHub Pages
- Hosting provider (Host Europe) for Domains and additional storage

GitHub Actions

Example

- ☞ Remove unneeded dependencies from the runner to free up some space
- ☞ Install required dependencies (Docker images, Python, Node JS)
- ☞ Generate IIIF derivates
- ☞ Deploy them to external storage, if necessary
- ☞ Generate additional files (Images, Node dependencies)
- ☞ Run Hugo to create the site itself
- ☞ Deploy to GitHub Pages

GitHub Limitations

- Storage!
  - Size of pages can't exceed 3.5 GB
    - Solution: Deploy generated derivates somewhere else using `rsync` / `ssh`
  - Storage of Action Runner is limited
    - Solution: Segment derivate generation and deployment
  - Repository storage is limited
    - Possible Solution: Switch from JPEG to JPEG XL
- Runtime
  - Action runs are killed after 60 min

Tools

Content generation and storage

- ScanTailor (for post processing of scans)
- LibVIPS (for derivates) as a Docker Image
  - JPEG Images (JPEG XL Demo working)
- Hugo (static site generator)
  - YAML (also source for manifests)
  - Markdown
- Git

Tools

Presentation

- OpenLayers
- Mirador (with some patches)
- jQuery
- Bootstrap
- And some other CSS / JS frameworks

Workflow

Generalized and simplified

Scan

Post processing

ScanTailor

Content and metadata

Atom

Git

GitHub

IIIF generation

LibVIPS

File generation

Node JS
Python

Site generation

Hugo

Deployment

Delivery

Lessons learned

- Doesn't scale into the realm of digital libraries
  - But good enough for personal collections!
  - Great solution for experiments
- Choosing a IIIF (viewer) implementation could be easier
  - Compatibility matrix / implementation levels or certification?

Next steps

- More functionality
  - Interaction with materials
  - Maps
- More media types
  - Stereoscopic images
- Better metadata - for data donation to WikiSource

Demo

Thanks for your time!

Any questions?

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