



Computational
Health
Informatics



Integration of Orthanc into GNU Health

GNU Health Con 2023

ORT  ANC

GH  HMIS

Master thesis

- Title: **Integration of the DICOM server Orthanc into the hospital information system GNU Health**
- Author: Patryk Rosik
- Finished: July 2023
- Repository:
<https://gibraltar.chi.uni-hannover.de/rosik/integration-orthanc/>

Imaging workflow

- We need a precise description of the imaging workflow:
 - That is already possible
 - That is desired
- The desired workflow should be based on a medical perspective that knows hospital procedures
- Information gathered in Developer's Corner:
 - https://en.wikibooks.org/wiki/GNU_Health/Developer%27s_corner#Orthanc_integration
 - <https://docs.gnuhealth.org/hmis/devcorner/devcorner.html#orthanc-integration>

Patient assignment

- Orthanc: Takes DICOM tag *Patients ID* and generates new UUID using SHA-1
- GNU Health: Generates random 9-digit *Patient ID*, requires name & gender
 - Automatic mapping would not be necessarily correct if only based on mandatory fields of GNU Health and DICOM fields are possibly empty
 - Unless we find a way? Common ID? Unique ID mapping?

Synchronization

- Subject of synchronization?
 - Only referrals, not actual data
- Periodical or real time?
 - Cron could be used for periodical
- Use Tryton Cron?
 - Should be preferred over OS Cron

Python API

- Currently *beren* is used:
 - Beta status
 - Last commit July 2021
- But *pyorthanc*:
 - Was just presented
 - Last commit within September
- Should we consider switching to *pyorthanc*?
- Will it be maintained long-term?

Coding Conventions – For this and other modules

- Comments inside the code
- Doc Strings for generating documentation
- Documentation for all relevant functionalities inside the GUI
- Linting
- Test cases
- Understandable error messages inside the GUI

Who?

Now who will work on that?