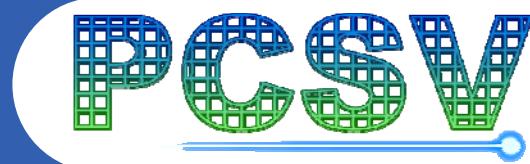


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Medical Images Platform

Arnaud Fessy

<http://clrpcsv.in2p3.fr>



MIP functionalities



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Operational functionalities :



Upload

Quickly upload images on a Dicom server
→ Multithreaded upload



Visualization

Visualize one or more Dicom images
→ Functionalities : confidentiality, color inverse, zoom, multi frames, etc...



Anonymization

Remove the confidential data from Dicom images

Description	Tag
Study Instance UID	(0000,0010)
Study ID	(0000,0011)
Series ID	(0000,0012)
Patient's Name	(0010,0010)
Study Date	(0000,1000)
Study Time	(0000,1001)
Accession Number	(0000,0012)
Referring Physician Name	(0000,0010)
Referring Physician ID	(0000,0011)
Patient's Birth Date	(0010,0010)
Patient's Sex	(0010,0011)
Name of Primary Reading Study	(0000,1000)
Admission Discharge Description	(0000,1001)

Dicom metadata extraction

Extract the medical data from the Dicom images
→ Backup the Dicom data under text and xml formats



Metadata registration In AMGA

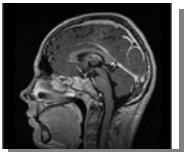
Parse the medical data and to store them in AMGA
→ Make possible to integrate the Grid aspect in the Web platform

MIP functionalities to come

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GridFtp upload



Visualization: Management of a broader panel of Dicom standards



Security: authentication by certificate + encryption + hydra



Job submission functionality with automatic failed jobs resubmission



Images & Jobs results research with an Amga search engine



UI integration

Upload



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Medical Images Platform

Welcome ›

Upload images ›

Download Images ›

View Images ›

Anonymise Images ›

Online help ›

Medical Images Platform

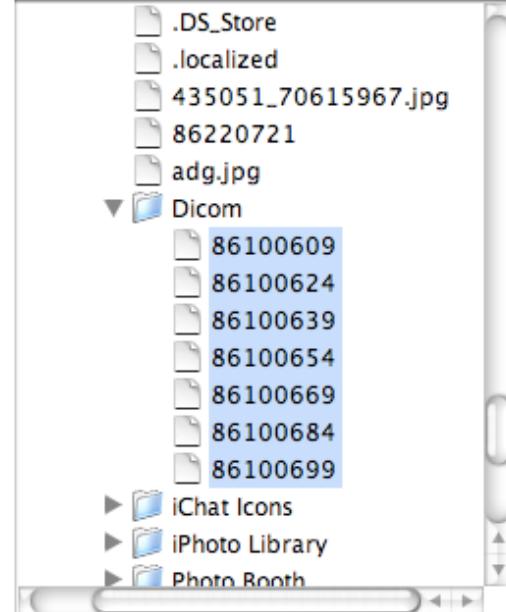
Upload images

Select the files to upload

Progress of upload

0%

Directory recursive upload



Upload information

Start of upload

Number of files to upload : 7

Total size to upload: 3037336

Start upload

Stop upload

Clear details

View image

Visualization



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Medical Images Platform

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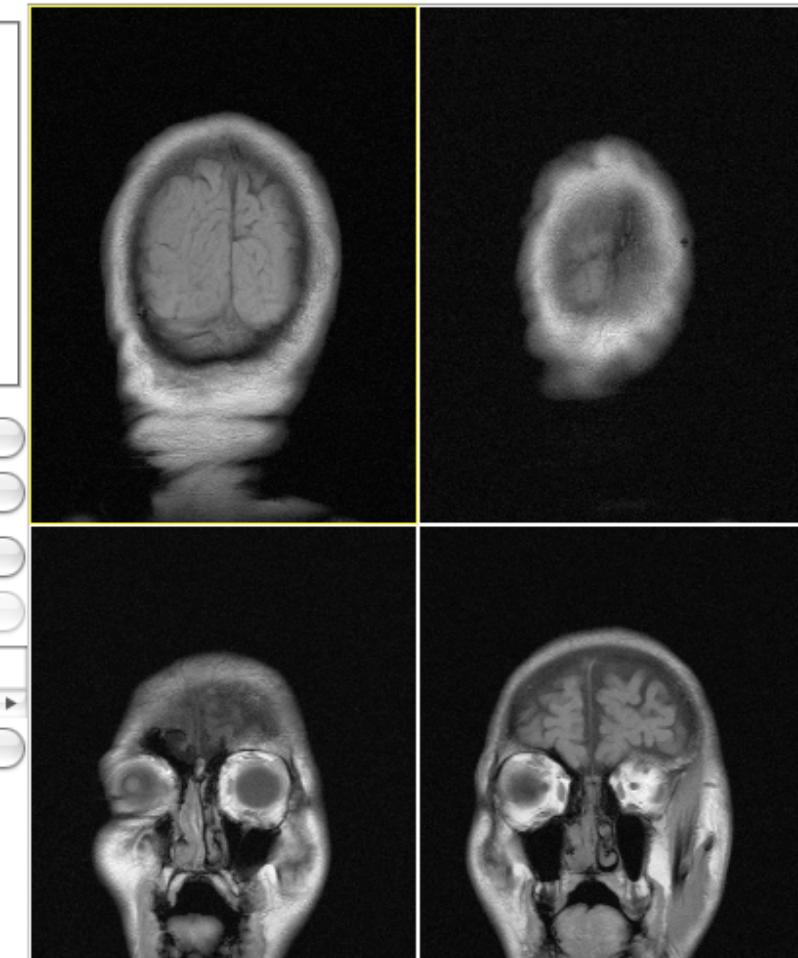
View images

Mouse Manipulation

- WL/WW(All images)
- WL/WW(Single)
- [Default WL/WW](#)
- [Reverse](#)
- Move
- Zoom
- [Reset Move/Zoom](#)
- Loupe

[Reset Angle](#)[Flip RL](#)[Flip UD](#)[Cine Mode](#)<<<-->>>**ImageNo**

1

[LessFrame](#)[MoreFrame](#)**Patient Info.****Study Info.**

Anonymization & metadata extraction



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Medical Images Platform

- Welcome ▾
- Upload Images ▾
- Download Images ▾
- Anonymise images ▾**
- Online help ▾

Anonymise images

Select the files to anonymise

Directory recursive anonymisation

- Documents
 - Enregistrement
- Library
- Movies
- Music
- ▼ Pictures
 - .DS_Store
 - .localized
 - 435051_70615967
 - 86220721
 - adg.jpg
- ▼ Dicom
 - 86100609
 - 86100624
 - 86100639
 - 86100654
 - 86100669
 - 86100684
 - 86100699

Progress of anonymisation

100%

Anonymisation options

Retrieve metadata

Format Text
 Format XML

MetaData destination

Anonymisation information Status : OK

Start of anonymisation

Number of files to anonymise : 3

Total files anonymised : 3

Anonymisation completed

End of anonymisation

Image(s) destination

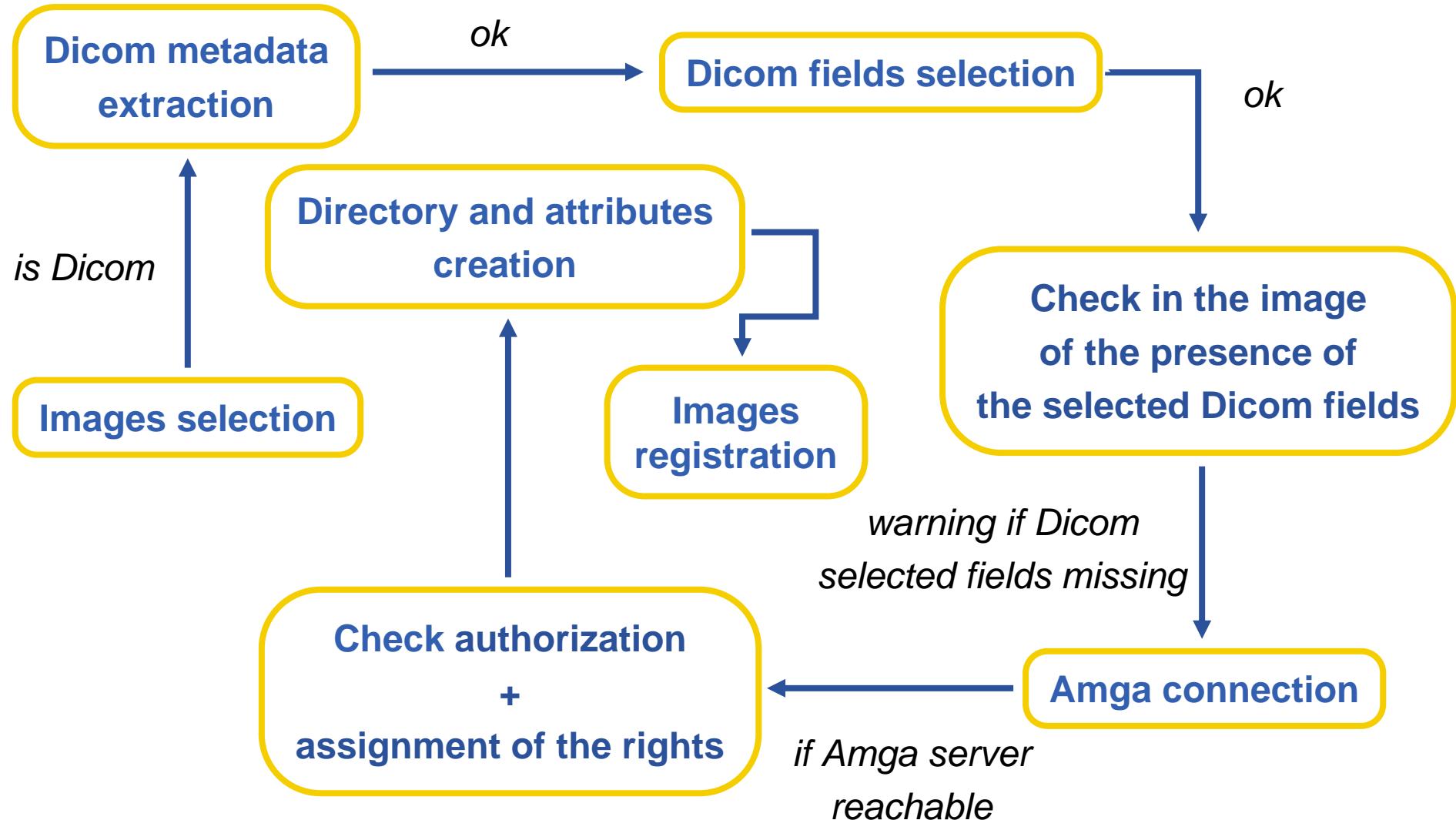
Start anonymisation

Stop anonymisation

Amga image registration (principle)



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Amga registration (under development)



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AppletViewer : amga.AmgaInterface.class

Select Dicom metadata you want to register

<input checked="" type="checkbox"/> Modality	<input checked="" type="checkbox"/> Study ID	<input checked="" type="checkbox"/> Image number
<input checked="" type="checkbox"/> Patient name	<input checked="" type="checkbox"/> Study description	<input checked="" type="checkbox"/> Image type
<input checked="" type="checkbox"/> Patient ID	<input checked="" type="checkbox"/> Study date	<input checked="" type="checkbox"/> Image date
<input checked="" type="checkbox"/> Patient sex	<input checked="" type="checkbox"/> Study time	<input checked="" type="checkbox"/> Image time
<input checked="" type="checkbox"/> Patient weight	<input checked="" type="checkbox"/> Acquisition number	<input checked="" type="checkbox"/> Sequence name
<input checked="" type="checkbox"/> Patient birth date	<input checked="" type="checkbox"/> MR acquisition type	<input checked="" type="checkbox"/> Scanning sequence
<input checked="" type="checkbox"/> Patient age	<input checked="" type="checkbox"/> Acquisition date	<input checked="" type="checkbox"/> Sequence variant
<input checked="" type="checkbox"/> Patient position	<input checked="" type="checkbox"/> Acquisition time	<input checked="" type="checkbox"/> Slice thickness
<input checked="" type="checkbox"/> Physician name	<input checked="" type="checkbox"/> Series number	<input checked="" type="checkbox"/> Slice location
<input checked="" type="checkbox"/> Institution name	<input checked="" type="checkbox"/> Series description	<input checked="" type="checkbox"/> Imaging frequency
<input checked="" type="checkbox"/> Institution address	<input checked="" type="checkbox"/> Series date	
<input checked="" type="checkbox"/> Station name	<input checked="" type="checkbox"/> Series time	
<input checked="" type="checkbox"/> Manufacturer model		<input type="button" value="Select all"/>
<input checked="" type="checkbox"/> Manufacturer		<input type="button" value="Deselect all"/>

Dicom fields selection

AppletViewer : amga.AmgaInterface.class

Select Dicom images to register

Progress of Amga registration
0%

Directory recursive Amga registration

Amga registration information

Start Amga registration
Number of files to register : 1
Disabled Dicom fields :

Amga registration

Some fields have not been detected in the Dicom image and will not be registered. Do you want to continue?

Start Dicom images Amga registration

Checking Dicom fields selected

Global architecture

PCSV

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