Starviewer

Medical Imaging Software

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GILab

Universitat de Girona

FOSDEM'18

2018-02-03

Over 10 years fulfilling the daily needs of clinicians and researchers

2004 collaboration agreement

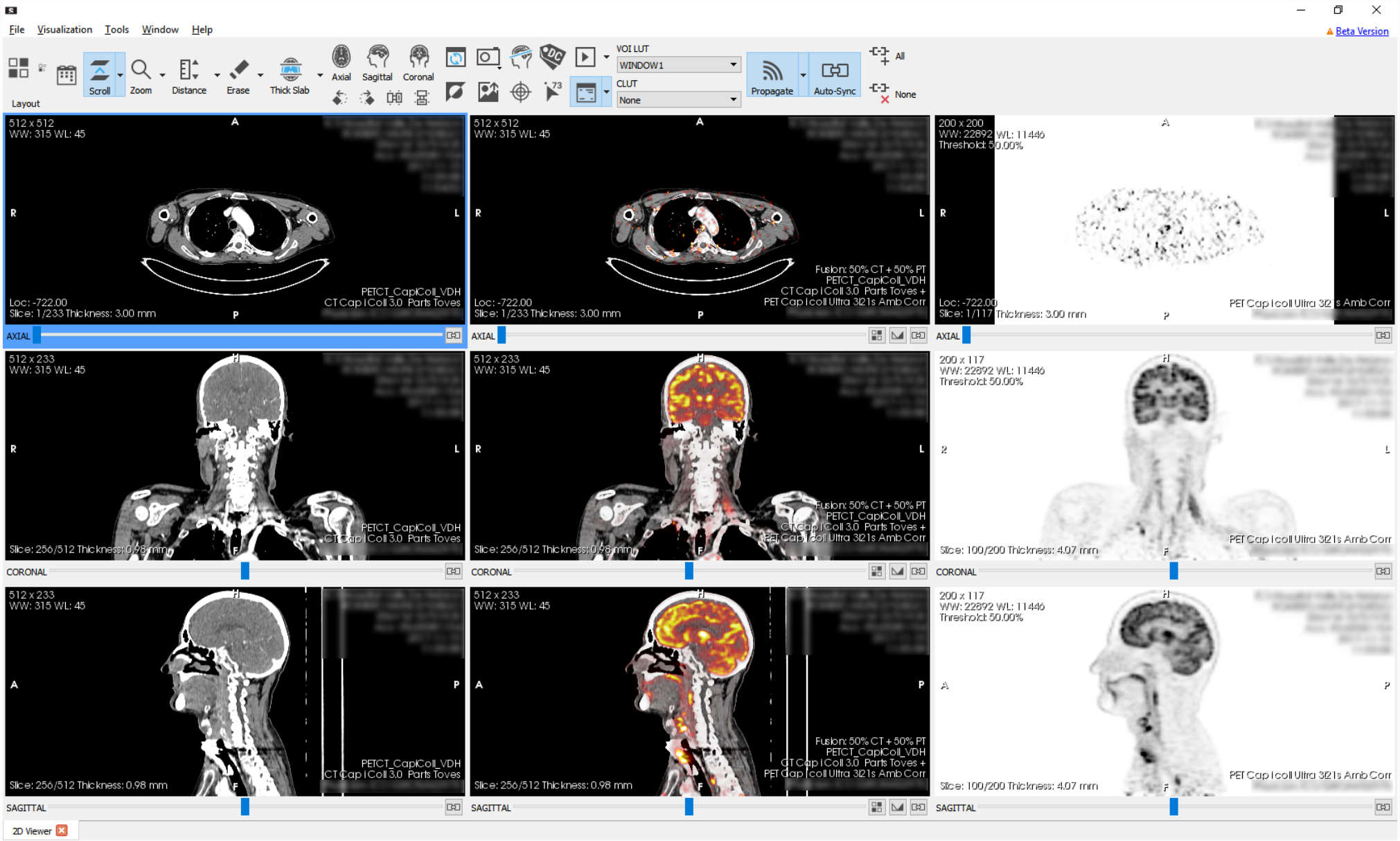
Graphics & Imaging Laboratory

IDI
INSTITUT DE
DIAGNÒSTIC PER
LA IMATGE

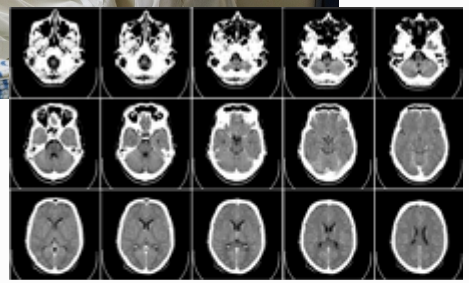
Research knowledge

Radiology experience

To develop **THIS**

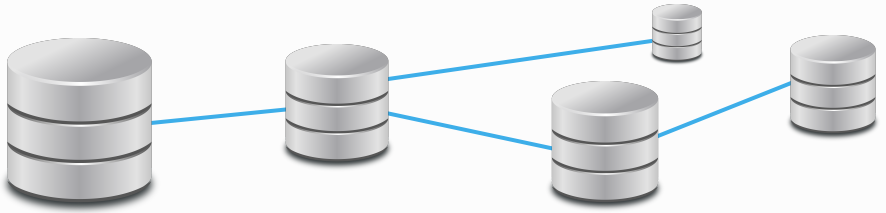


Radiological viewers are essential in the medical imaging workflow



1

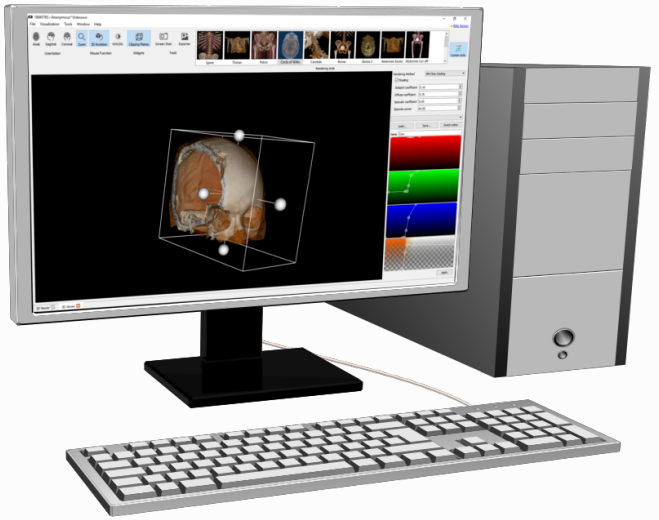
2



PACS
Picture Archiving and Communitacion System

RIS
Radiological Information System

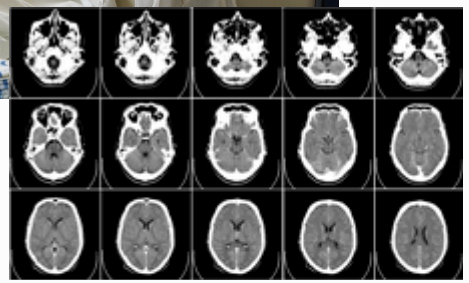
3



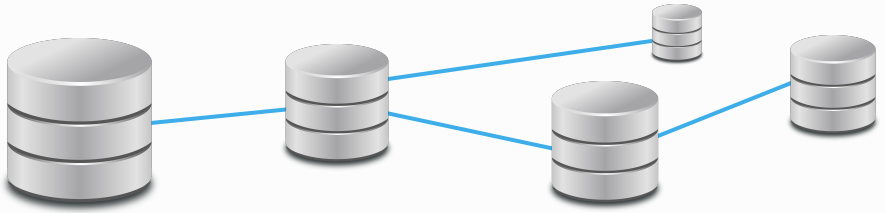
Radiological viewers are essential in the medical imaging workflow

DICOM

1



2



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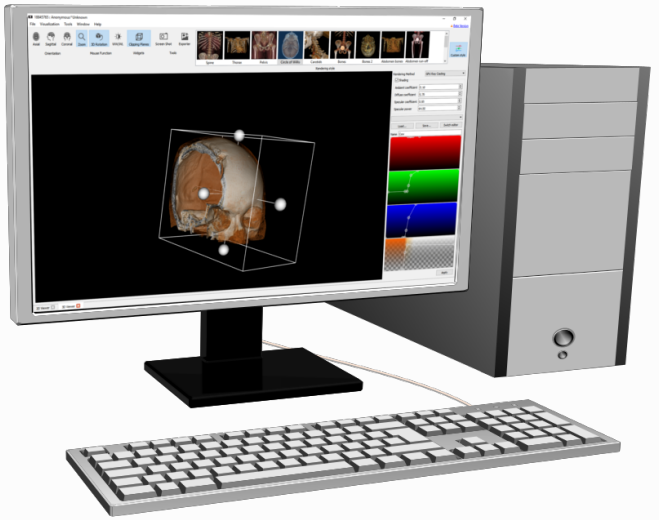
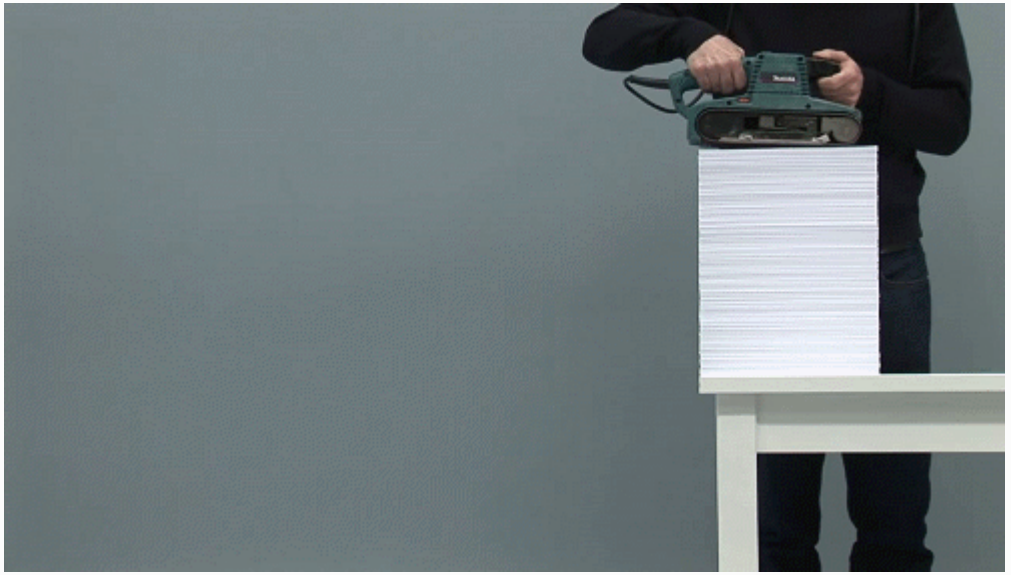
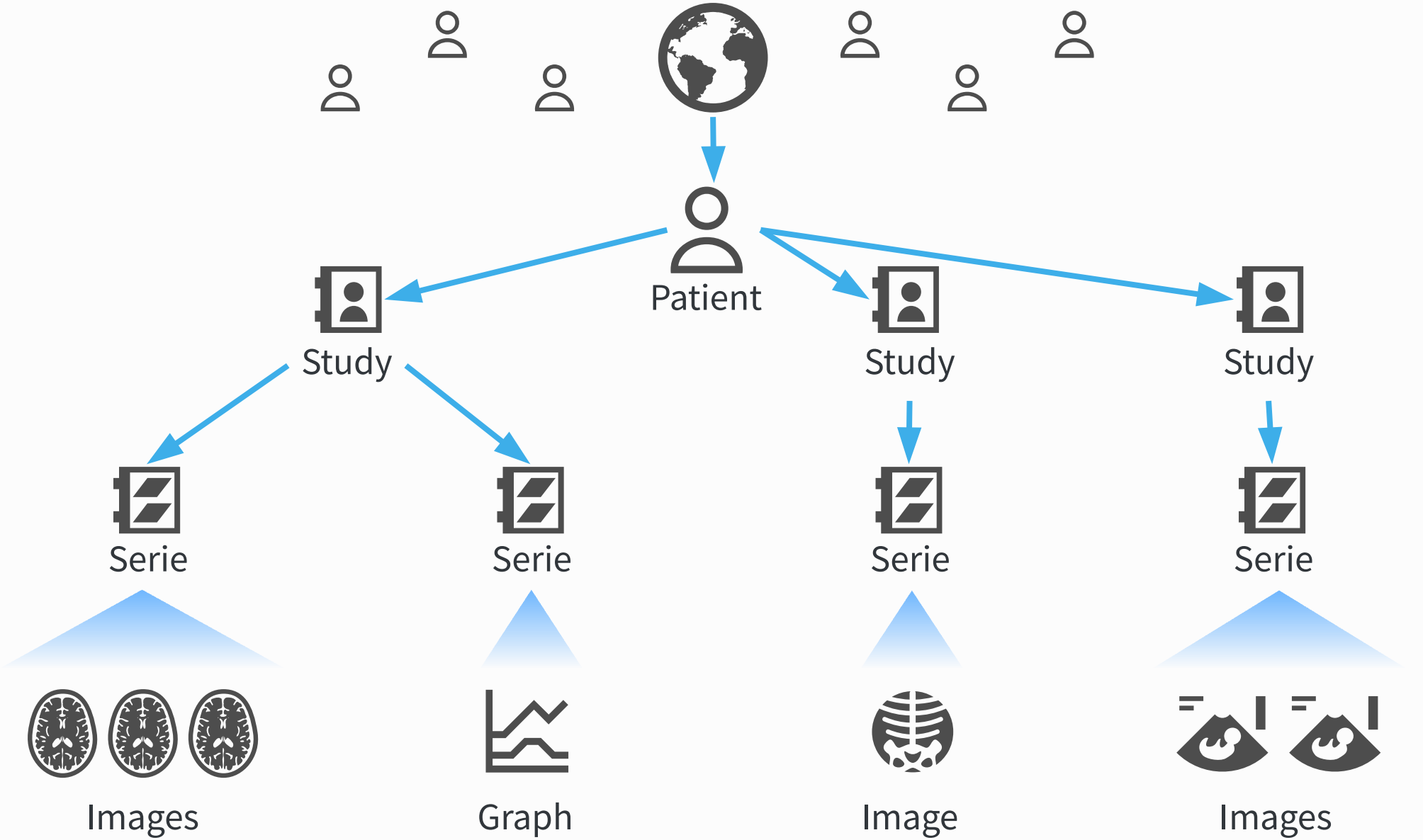


What is DICOM?

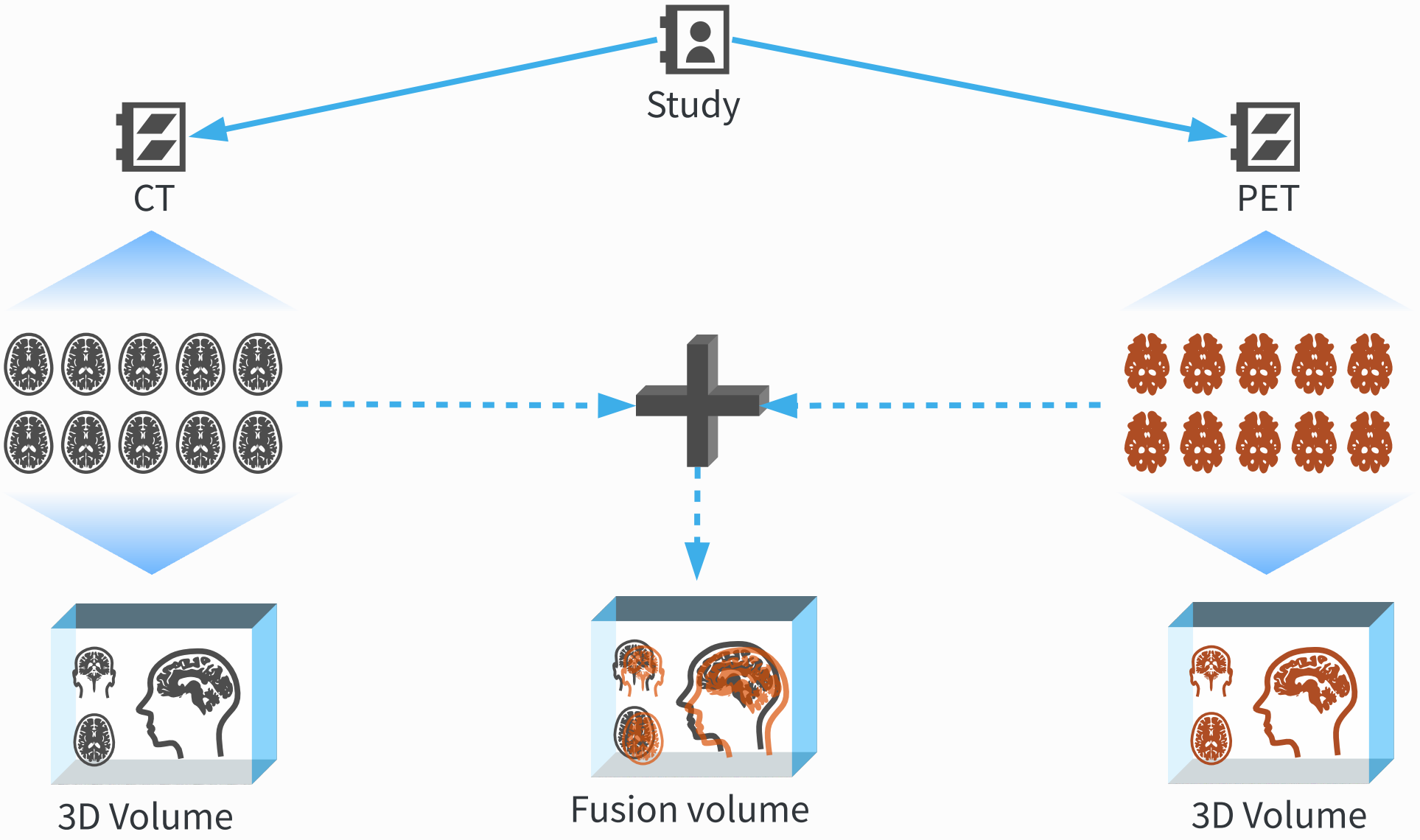
- Digital Imaging and Communications in Medicine
- Extensive medical imaging standard:
  - 21 parts
  - 145 MB of PDF’s
  - 6074 pages
  - 30.4 Kg of paper
  - 68.3 cm tall



The world according to DICOM



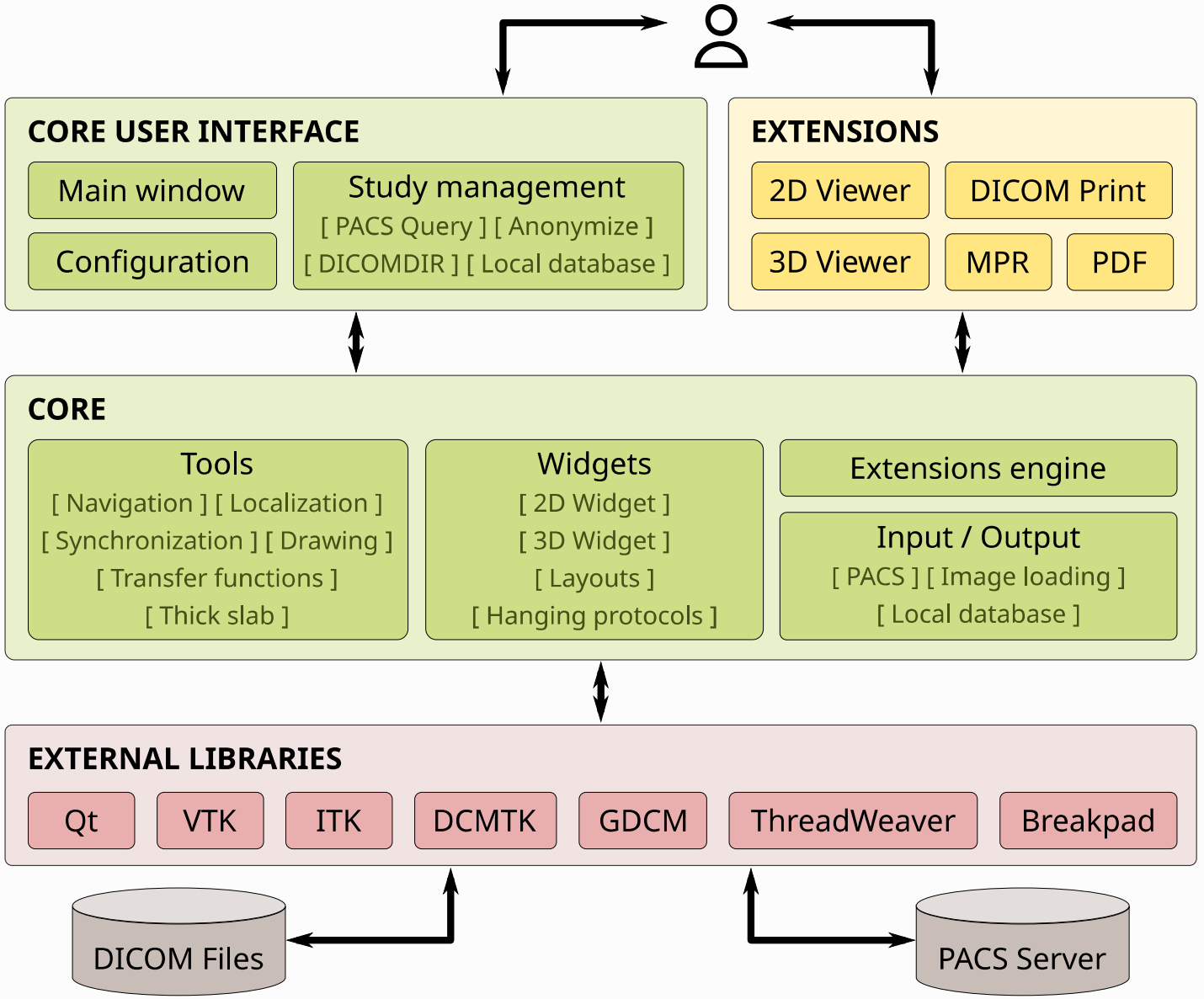
From slices to volumes



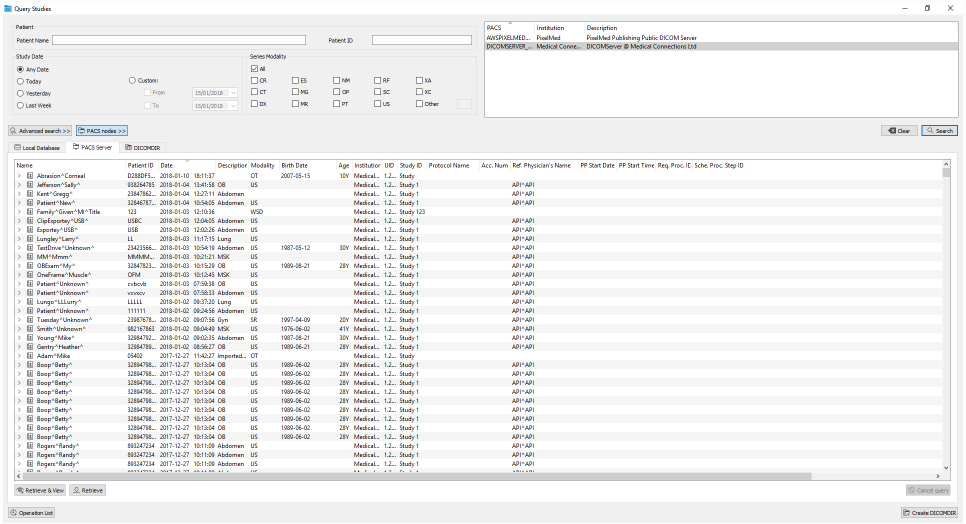
Starviewer technical information

- C++11
- Qt, VTK, ITK, GDCM, DCMTK, ThreadWeaver, Breakpad, easylogging++
- Qmake
- Multiplatform (Windows, macOS, GNU/Linux)
- x86 and OpenGL 3.2
- Multilanguage (ca, en, es)
- GPLv3+ since 2014

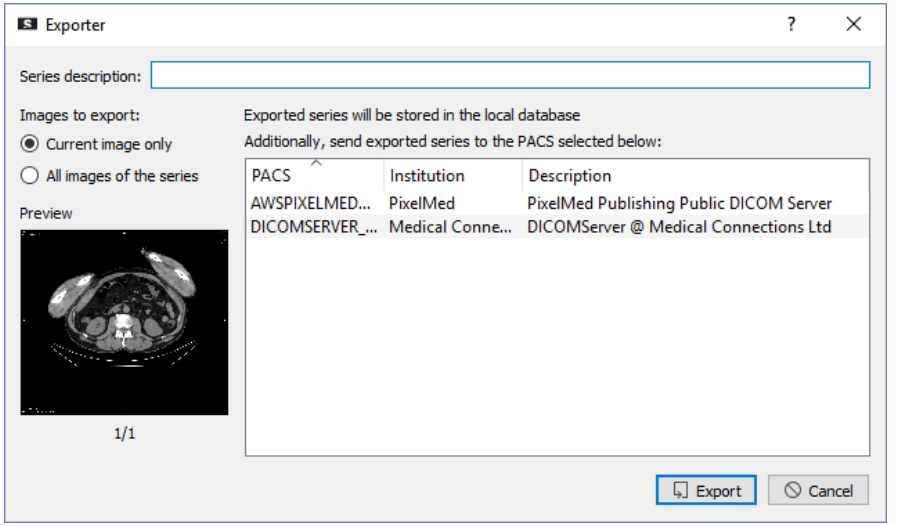
Architecture



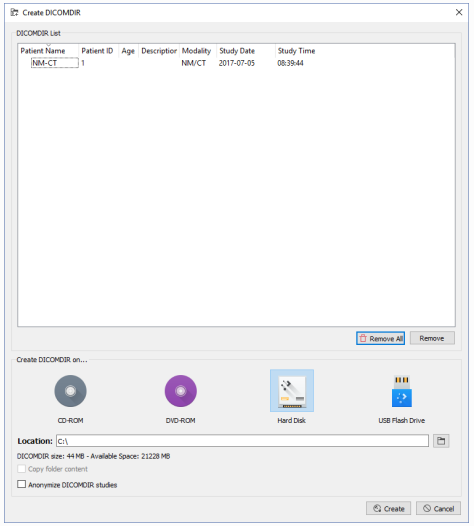
Core UI



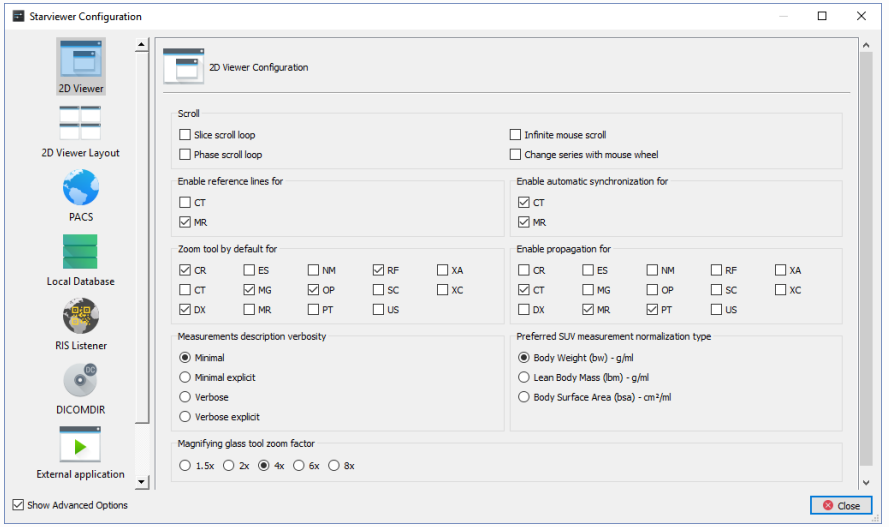
Study management



Series export



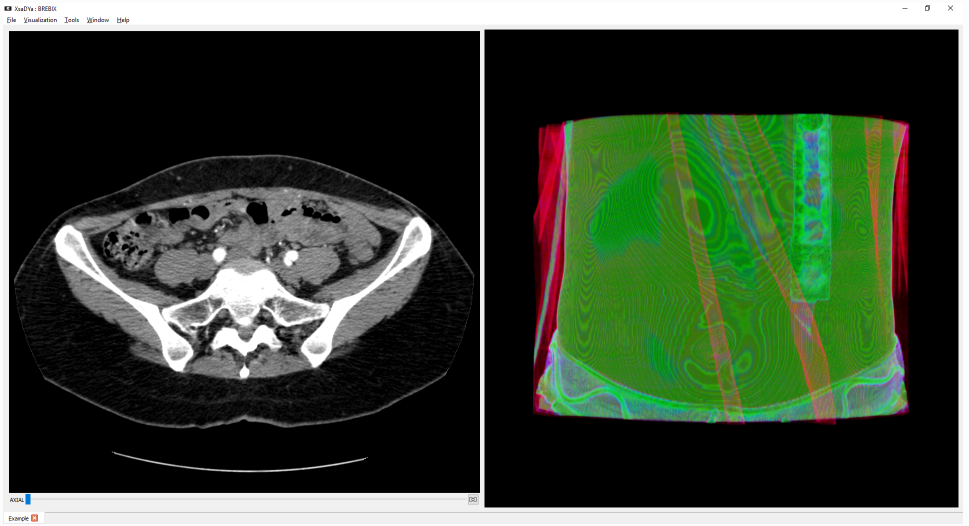
DICOMDIR export



Configuration screen

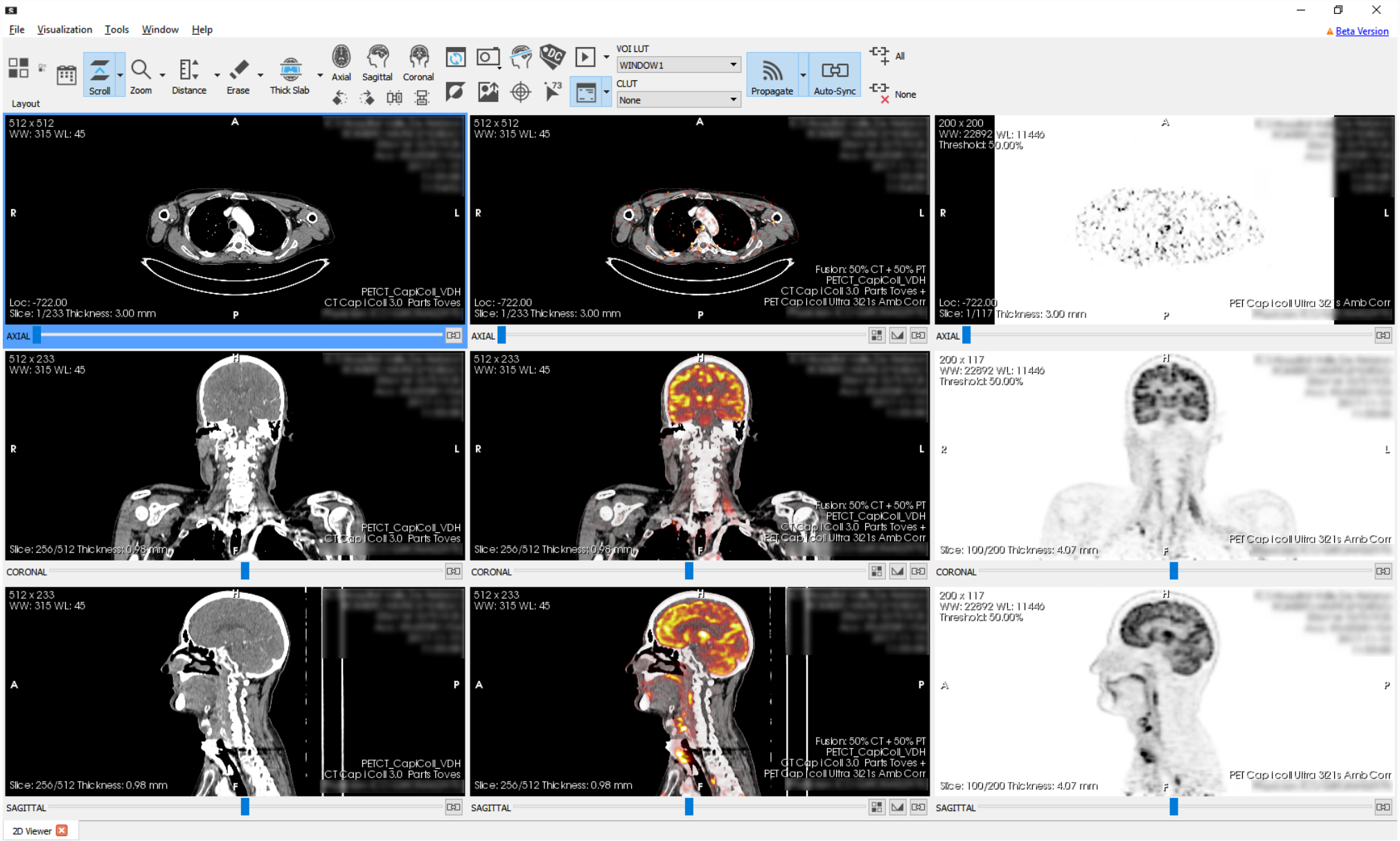
Extensions

- Support general or specific workflows or features
- Currently 5 stable extensions
- New custom extensions can be easily created
- Static libraries
  - Recompile :(
  - But could use LTO :)
- Both static and dynamic in the future

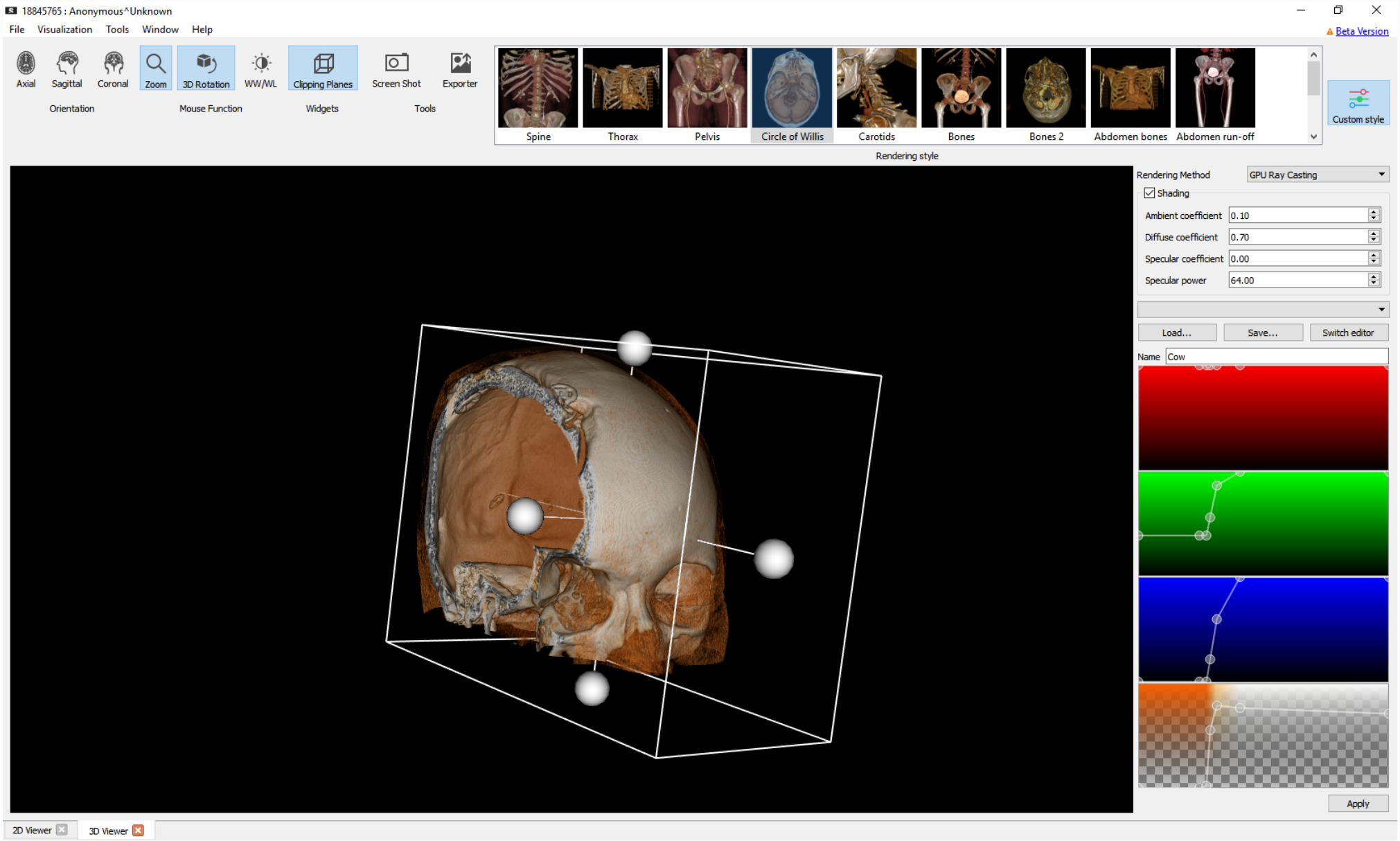


134 lines of C++

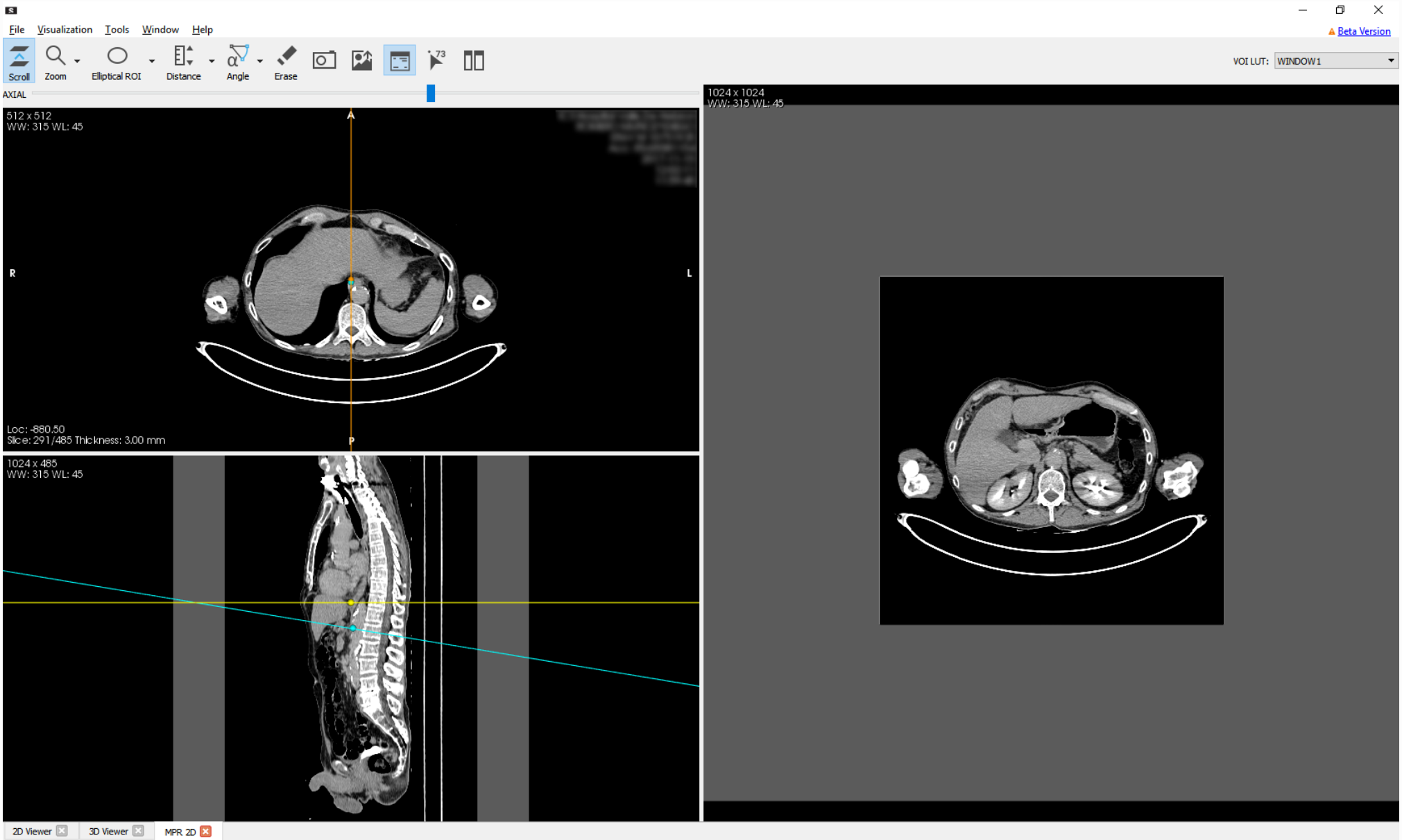
2D viewer extension



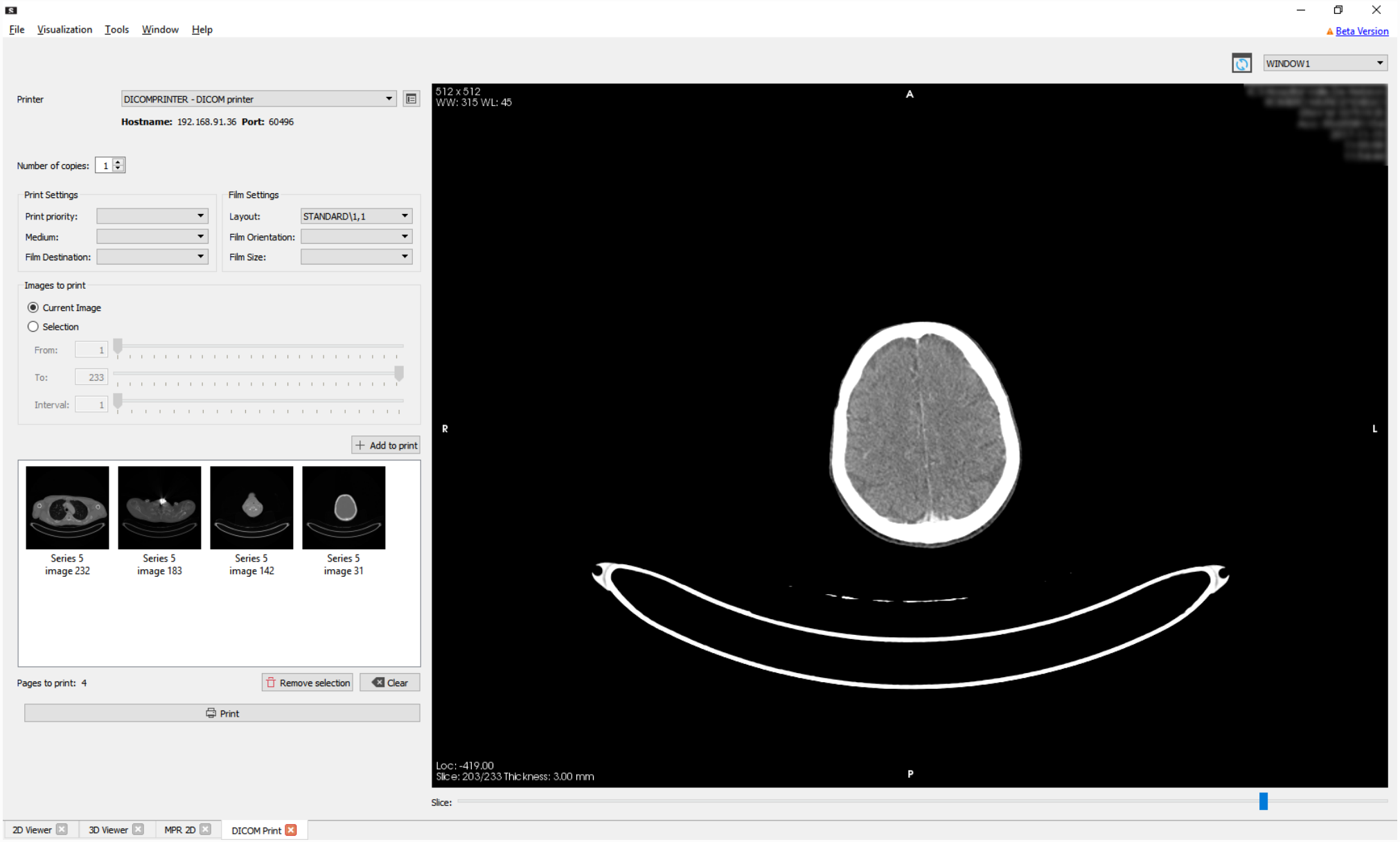
3D viewer extension



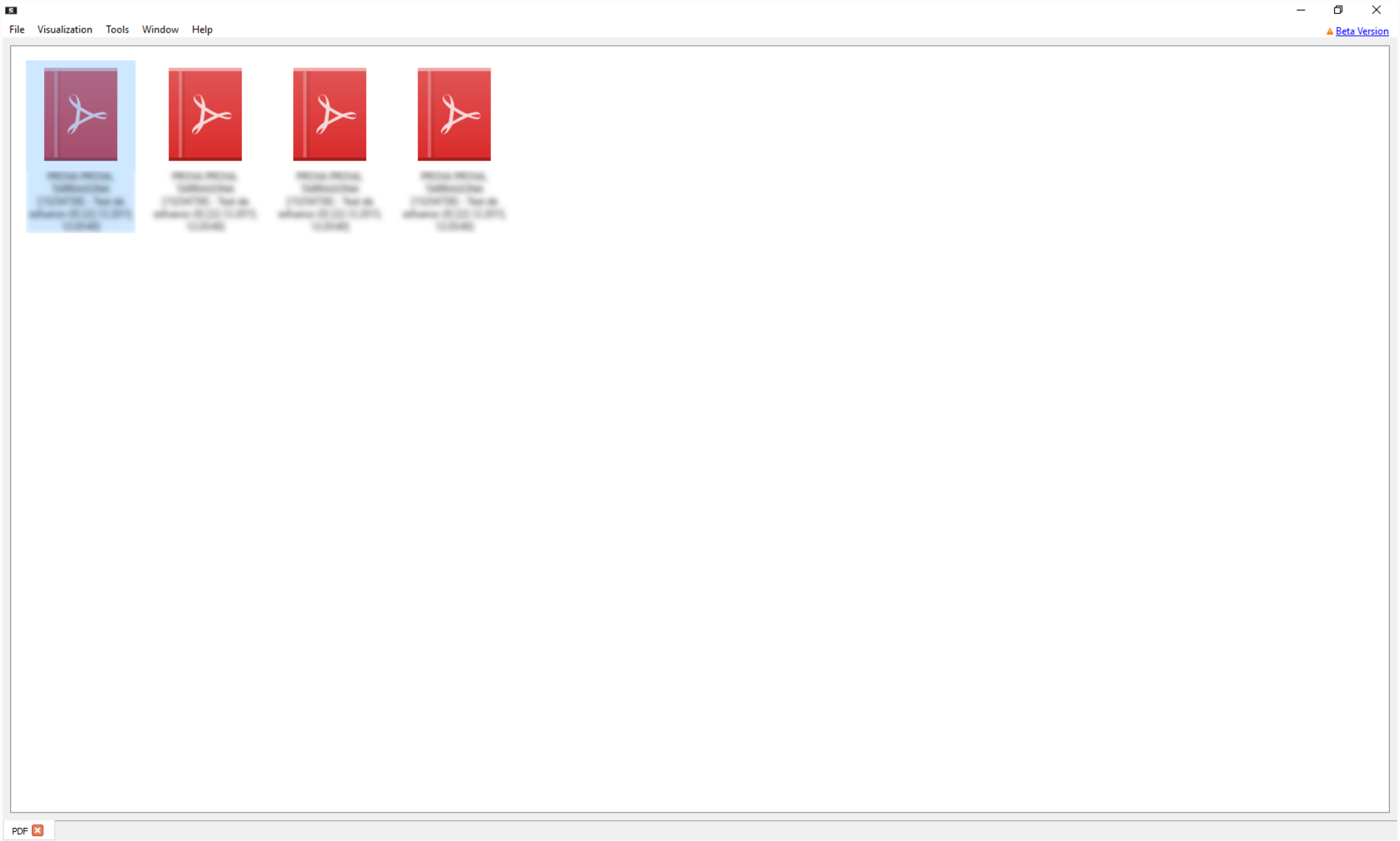
MPR extension



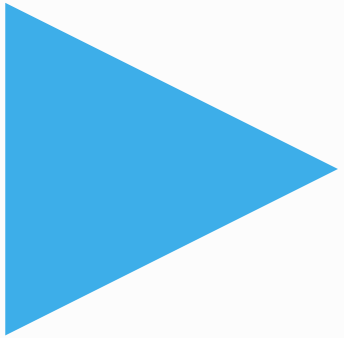
DICOM print extension



PDF extension



Demo



Links

- contact@starviewer.udg.edu
- http://starviewer.org
- https://github.com/starviewer-medical/starviewer
- DICOM: https://www.dicomstandard.org/current/