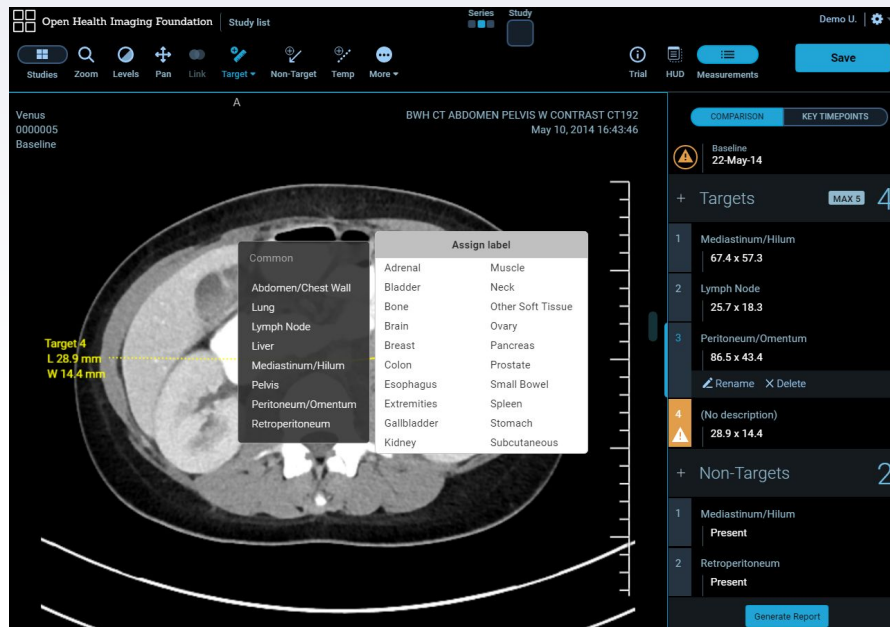# MI4WEB

Projeto em Informática
LEI / Universidade de Aveiro
2021/2022

1

Context

- In an environment related with medical imaging there is the need to use technologies, that ultimately govern the heavy dataflows between image sources and image consumers;

- PACS – component with services to storage, query and retrieve imaging studies .

Context

Nowadays, by sending image objects, between modalities and a PACS server, the clients can:

▶ retrieve patient studies for expert evaluation;
▶ retrieve automated image post-processing tasks.

The Cancer Imaging Archive
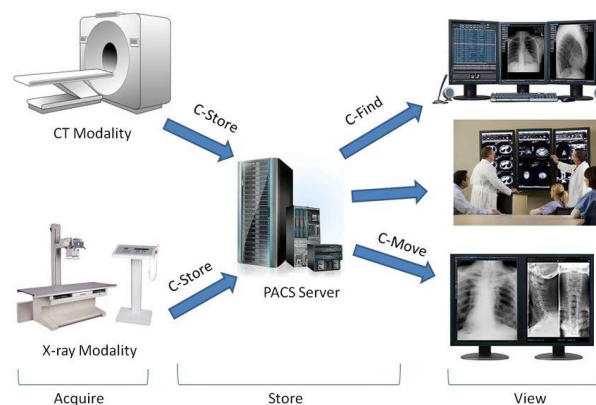
https://www.cancerimagingarchive.net

Context

DICOM is a standard that allows:

- ▸ handling, storing, printing and transmitting information in medical imaging;
- ▸ dataflux of medical imaging, ensuring interoperability between entities of one/multiple institutions;

Thanks to DICOM, the concept of medical imaging networks has evolved from a "LAN" setting to a much wider concept.

Problem

- Software applications of medical imaging visualization already exist, but this are blocked by the vendor;

This is becoming a problem because

- As time goes by, the necessity of web-based medical imaging visualizations has been increasing.

Goals

With the conception and deployment of this medical imaging platform we want it to be capable of:

- ▶ Basic transactions for medical imaging storage and retrieval;
- ▶ DICOM import and export;
- ▶ Core 2D image display functionalities;
- ▶ 3d Display tools as VTK plugins;
- ▶ Interactive image segmentation tools;
- ▶ Image Annotation Edition and Storage.

Tasks

In order to monitor the tasks we used a tool called Jira, in which we:

- ▸ Defined the main modules of the project;
- ▸ Listed the tasks in each modules;
- ▸ Assign to each task and module one or more elements of the group.

◆ Jira Software

Expected results

- Having a platform in the Web that allows us to visualize image studies using a visualizer in conjunction with a server;

- The services will have to run in the web, in a client-server structure;
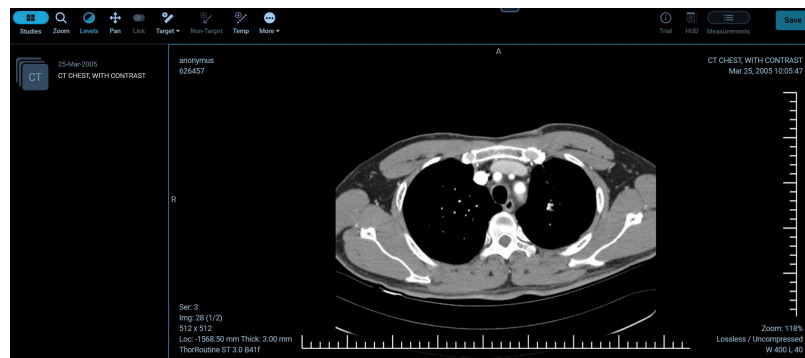
Expected results

- The visualisation of the images will have to allow canonical views and three-dimensional object views;

- The implemented system will have to be distributed.
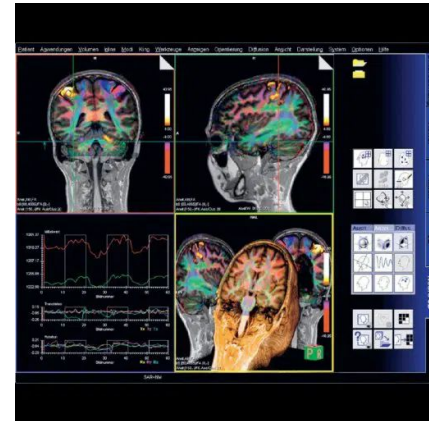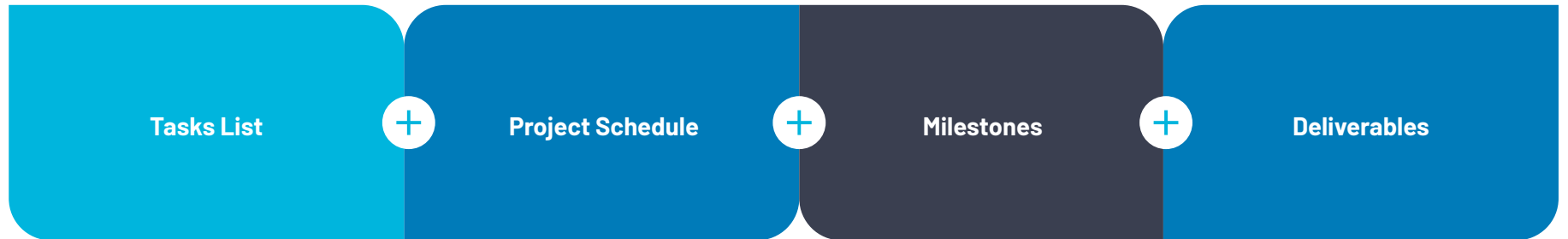
Related Work

Identical or related work:

- ▸ OHIF – browser compliant viewing clients;
- ▸ DICOOGLE – an open source PACS;
- ▸ ORTHANC – open source DICOM server.

Calendar

To create the calendar of the project development we used the tool Jira:

https://mi4web.atlassian.net/jira/software/projects/MI4/boards/1/roadmap

Tasks List	⊕	Project Schedule	⊕	Milestones	⊕	Deliverables

Communication

- Project Plan - Jira;
- Reports and presentations - Google Docs and Google Slides;
- Repository - Github;
- Project website.

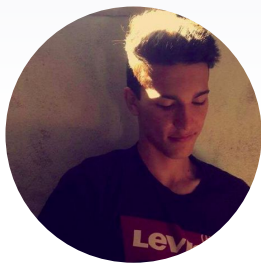# Research Group Presentation

Investigation unit that we belong to:

▸ IEETA - Institute of Electronics and Informatics Engineering of Aveiro

Team Presentation

André Freixo
Nº mec 98495
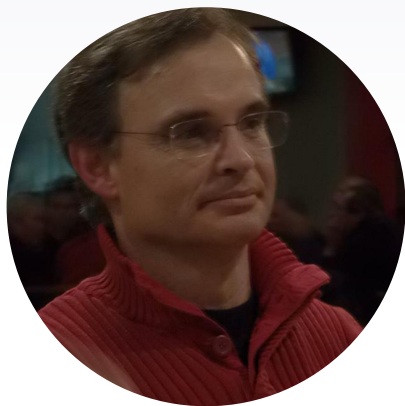
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THANKS!

Any questions?