



Mauritania 1st Training Program

MACbioIDi Project

July, 20th 2018

María Dolores Afonso Suárez



Mauritania Training Program.

Day 1. 10/07.

Day 2. 11/07.

Day 3. 12/07.

Day 4. 13/07.

July 2018. Training program.

Day 1. 10/07.

Location:

Université de Nouakchott Al Aasriya - Faculté de Médecine.

Agenda:

09:00-09:30 Meeting with Mr. Dada Lebchir

09:30-11:30 Training Session 1

Day 2. 11/07.

Location:

Université de Nouakchott Al Aasriya - Faculté de Médecine.

Agenda:

09:00-11:00 Training Session 2

11:00-11:30 Simulation centre visit

Day 3. 12/07.

Location:

Université de Nouakchott Al Aasriya - Faculté de Médecine.

Agenda:

09:00-11:00 Training Session 3

Day 4. 13/07.

Location:

Université de Nouakchott Al Aasriya - Faculté de Médecine.

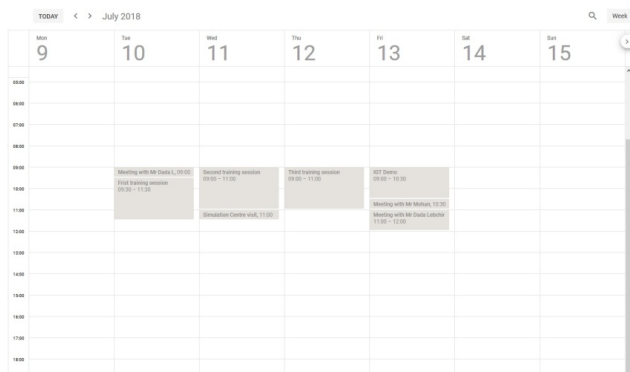
Agenda:

09:00-10:30 IGT Demo

10:30-11:00 Meeting with Mr. Mohamed El Moctar El Moustapha SEPTY's thesis director Mr Mohamed Lemine Diakite (PhD.)

11:00-12:00 Meeting with Mr. Dada Lebchir

Weekly Agenda: (<https://medtec4susdev.github.io/MACbioIDiWorkshop/index.html>)



Images in Annex I

Overview

After a warm reception from Mr Dada Lebchir in his office and his introduction and perception of the MACbioIDi project, we went to the training room. Once there he also introduced the training sessions and his expectations about these sessions.

Session 1. Medical Imaging and 3DSlicer basics.

Session 2. Managing 3DSlicer. Loading volumes.

Session 3. Segmentation. Visualization of anatomy atlases.

Session 4. Image Guided Therapy.

For all the sessions, hardware and software requirements were already installed and prepared by Mr Mohamed El Moctar El Moustapha Septy. Both: Mr. Moulaye Ahmedou Idriss and Mr Mohamed El Moctar El Moustapha Septy were always available for any help I needed. Mr. Moulaye Ahmedou Idriss participated also as professor in all the sessions, not only assisting other participants but also sharing his images and anatomy atlases he had finished for the NA-MIC workshop.

All the documents prepared for the training will be available at: https://mt4sd.ulpgc.es/slicer-int/index.php/P%C3%A1gina_principal

Besides the training there were two visits:

The simulation centre. *Faculté de Médecine - Université de Nouakchott Al Aasriya.*

Mr. Sidi El Wafi introduced the simulation centre characteristics and current needs about phantoms and simulation training systems. His presentation considered the Mauritanian hospitals list of priorities.

Faculté of Physics.

Mr. Mohamed El Moctar El Moustapha Septy introduced me his thesis director Mr Mohamed Lemine Diakite (PhD.). We agreed how we could keep in touch regarding the development of his research work. Mr Septy will need a recommendation letter and the proposal of different research lines to follow. All these documents are already being issued and will be sent by *DHL* during the next week (23rd-27th July).

Contacts:

Most of the attendees have shown interest in the project and have consulted aspects of the program that could help in their subjects. One of them: Ms. Aziza Elmahjoub has requested to work in the project with an internship of 5 or 6 months to validate the second year of her master degree. Currently she is a second year student of a master degree in life imaging at the University of Pierre and Marie Curie in Paris. In the future, she intends to continue her PhD studies.

Besides, according to the work developed by Mr. Kleib Ahmed Salem in the Faculte de Medecine, Universite Al Aasriya de Nouakchott and the Service de Neurochirurgie at the Hôpital Bretonneau, and also the work of Mrs Sara Fernández Vidal, at the ICM Brain and Spine Institute in Paris, I have put them in contact for them to evaluate if 3DSlicer could be a common interest for both.

Results

After the training week an opinion questionnaire sent to the professors that attended the sessions will be analysed to evaluate the results of the program. The questionnaire is available at: <https://goo.gl/forms/5AHTNX2J2rP8H1Wc2>

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Next steps

Training material for lectures. From Gran Canaria we will keep in touch with Mr Mohamed El Moctar El Moustapha Septy and Mr. Moulaye Ahmedou Idriss in order to provide the help needed for the development of training material. Other resources like images, examples or environments will also be provided in agreement.

Training material for simulations. From Gran Canaria we will keep in touch with Mr Mohamed El Moctar El Moustapha Septy and Mr. Moulaye Ahmedou Idriss in order to provide a similar simulation IGT station (see Annex II) to the one used. This training material could be located in the simulation centre or the labs. The phantom will be defined in a new project document¹.

Project proposal for Ms. Aziza Elmahjoub in order to finish her master degree. This proposal will be a project aimed to work with Medical Imaging Technologies, defined around the 3DSlicer ecosystem. It will be defined: description, objectives, resources, and collaborators in a new project document².

Final aspect

From the MACbioIDi project in Gran Canaria, the coordinator and Principal Investigator Mr. Juan Ruiz Alzola (PhD.) and his team offer and also require, the necessary collaboration so that the jointly defined subprojects could be developed within the framework of medical technology for sustainable development. In fact this is what we have been doing along this year 2018.

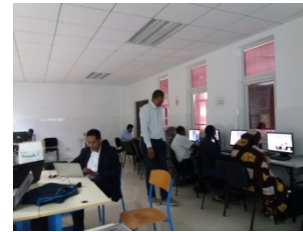
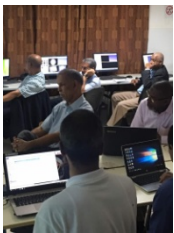
¹ This document will be defined along this year 2018.

² This document will be issued during august, 2018

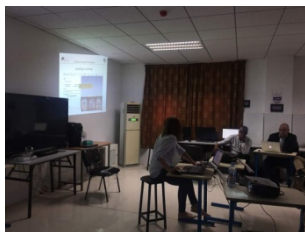
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ANNEX I

Tuesday, 10th of July.

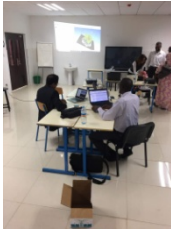


Wednesday, 11th of July.

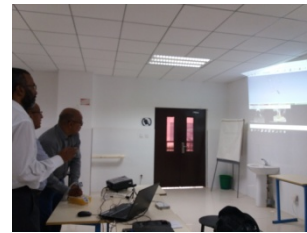
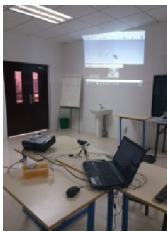


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Thursday, 12th of July.



Friday, 13th of July.



ANNEX II

The Imaging Guided Therapy project consists on the creation of a training station for the students to train in the use of ultrasound systems. With the use of IGT project, students and professor can plan, perform and evaluate procedures and interventions.

The station includes both: the real world (phantom + US system) and the virtual world (virtual representation of the real world: camera+markers+aruco+plus server+3DSlicer). Figure 1. Figure 2.



Figure 1. Real world and its virtual representation scheme

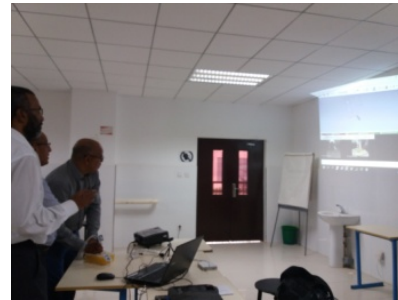


Figure 2. Training session

The phantoms for the training station will be defined according to the needs of the users. If there is a list of priorities regarding diseases, organs or bones, it should be studied to determine which phantoms are to be created and their characteristics.



Besides aruco and plus server, the IGT system will use 3DSlicer and its IGT extension as training platform. All this software applications are delivered under GPL license.