Report

Period: Sep. 12-18, 2014

Task: **Preliminary Works towards Gathering 3D body scanned database and 3D modeling**

Subtasks: Issues Related to the Scanner and the Associated Data, CANDIDE Model

1 The Scanning Process

As the first step, one has to get to know how the scanner works and which information can be obtained/extracted from it. I got familiar with ScanWorx software and then I calibrate the device and perform the scanning process. Furthermore, it was necessary to investigate the preparatory details of the scanning process. More precisely, working with the scanner demands a set of considerations for the sake of obtaining visual information which is as detailed and precise as possible. Besides, the person who is going to be scanned needs some guidance and equipment to prepare themselves for the foregoing procedure, either by themselves or with the help of the operator. Moreover, the scanner itself requires some technical maintenance and adjustment, which is almost automatically performed by the calibration wizard embedded in the software. It should be noted that the scanning room process need to be equipped with some accessories so as to both enhance the experience of the person being scanned and improve the quality of the results. The aforementioned instructions and requirements have led our group to prepare a document listing such guidelines regarding the scanning process, which will make it more comfortable and fast.

2 Preliminary Practical Work

As an initial case-study, Shahab's body was scanned with the 3D-scanner. It was a very helpful experience towards getting more familiar with the software and hardware aspects. One of the most important items in this experiment was recognizing which parts of the body, and to which degree of accuracy, can be measured. The results sounded satisfactory although some tolerable mismatches existed. As of now, a list of short descriptions of the measurements from the scanner (at least 100 numbers) has been prepared, which will make it possible for the reader to approach a tangible understanding of the numbers being displayed in the associated Excel sheet. It should be noted that for the step after the current one, which consists in classifying the obtained measurements on the basis of gender and size, one needs to realize which of this data matters when it comes to deciding and assigning classes. As a relevant point, also a formal agreement sheet was created, which will be signed by the associated party, so as to ensure having the consent of the persons being scanned, whose visual information will be used for the purpose of the ongoing project, to use and/or publish the information either directly obtained from their scan document or anyhow extracted from it. the foregoing document provides the signatory with the chance to allow the Laboratory either to use the data in any form it would need or just in part, being restricted about the terms corresponding, for example, to disclosure of data in scientific events or publicly-accessible servers.

3 Literature Review

As a matter of fact, after performing the initial steps of this thesis, either an already-existing package will be improved, and used, or a new one will be developed. The foregoing procedure will be implemented in such a way that first the prepared packages will be tested to see whether or not they would fit into the requirements and expectations of the proposed practical project. Meanwhile, it might be needed to make some amendments, adjustments or promotions to the aforementioned packages, which might demand

fundamental changes. More clearly, eventually, a completely new and different modelling package might be developed, which can meet the circumstances associated with the specific purposes of the current project. In any case, doing some basic reading and investigation and conducting some introductory research seem inevitable. Therefore, I read some research paper introducing the fundamental concepts and definitions of the CANDIDE model, the differences between its various versions, etc., to realize where the state-of-the-are in this area is. In the next step, it will be investigated that how these methods, or their alternatives, can be made used of, or be improved, to satisfy the requirements of the project.