

Project Title: Design and Development of Database for Maxillofacial and Craniofacial Data
Project No.: RG005-09ICT
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Abstract:

Surgeons are always looking for new tools to assist them in planning for surgeries. With better power and multimedia abilities, computers are now being used to model parts human body which can be used as a pre-operative model in surgical planning. For example CT-Scan and MRI data have been used in building 3D pre-operative model to help in maxillofacial surgery and craniofacial reconstruction [1]. Data acquired from CT scans and MRIs have been used to build computer-based 3D model of the bony defect in the face. These data are transferred into RE software to create the prosthesis using a computer-aided design (CAD) model [2-4].

Currently, in medical centers such as UMMC (University of Malaya Medical Center) CT-scan and MRI images are obtained using a DICOM compatible machine. This machine allows those data to be saved on CDs. These CDs are filed manually on shelves and kept in cabinets. This particular research project concentrates on the design and the development of a database system to store and share the CT scan, MRI, and 3D models of such data. The goal of the repository is to help doctors and facial modelers to find the data they need quickly, and to find most accurate data for the reconstruction. In addition to that, the database combines both the repository of data together with the patient database to assist in tracking the treatment carried out for each patient. This includes appointments and surgery scheduling.