# FINAL YEAR PROJECT REPORT

# A FILE SYNCHRONIZATION ENGINE FOR PACS

**By**

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**Institute of Management & Computer Science**

**Bahria University Karachi**

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# Abstract

In medical imaging, Picture Archiving and Communication Systems (PACS) are computers or networks dedicated to the storage, retrieval, distribution and presentation of images.

This report is of my final year project "A File Synchronization Engine for PACS". It is the basic software which helps doctors to upload file in PACS server without any time wastage and get regular updates about the files. The doctors don't have to look for new files each time they log on to server, instead the server itself notifies the user of the new, changed or updated file.

I start with the introduction and working of PACS server. Then I will move forward into explaining the basic PACS network and problems. After this come the analysis, design and implementation of my project. The report also highlights the various testing phases I am going through such as white box testing, black box testing, performance testing and documentation testing etc.

In the Analysis part I am going to cover the basic processes that are undergoing in the software, the requirements that are vital part of my software, the feasibility plan and the costing of the software. After this I give the implementation of the software, the various screen shots and the basic coding used to develop the software.

I started the project by first studying the PACS network architecture. Then I researched as to which model and concept can be implemented. After a thorough study and discussion with my project advisor and Dr. Kashif Mirza we decided on the core requirements and developed a plan. After this I moved to the coding and designing part. Finally I conducted tests to test that the results calculated by my software are par to the real world or not.

I learnt a great deal about digital imaging and PACS network architecture and theories while developing this software. I hope that this report will guide and help others in understanding the basics of PACS network

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