**ABSTRACT**

This report documents the Group Messaging System (GMS). The Group Messaging System is designed to replace messages left with pen and paper, by providing an easy to use system that allows leaving digital text messages to other users in the system, which can then be retrieved and reviewed from the recipient’s GMS inbox. The proposal is accomplished by adding value to an existing PC or laptop. By adding an external interface in the form of a customized button pad, web camera, microphone, speakers and a fingerprint reader (optional – for security) and controlling software, the GMS allows better communication between users of a shared environment.

GMS can be beneficial to many parts of society including providing a more personal communication medium to today’s busy families and in university dormitories. It also provides a more persistent and secure way of leaving messages in a professional environment, such as a hospital, and a reception area in an office.

The System Overview section of this report outlines the problem and proposed solution, performance requirements, design methodology and innovations in this system. The Implementation and Engineering Considerations section goes into the details of requirements elicitation and analysis, system design, user interface design, implementation considerations, and the testing process. Finally the Summary section gives a summary of what has been accomplished, and gives recommendations for future work.

**CONTENTS**

1. **INTRODUCTION\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1**
   1. **Motivation**
   2. **Problem definition**
   3. **Objective of Project**
   4. **Limitations Of Project**
2. **LITERATURE SURVEY\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_4**
   1. **Introduction**
   2. **Proposed System**
   3. **Group Messaging System**
3. **Analysis\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_7**
   1. **Software Requirement Specification** 
      1. **C Language**
      2. **I-Node**
      3. **Bit Vector**
      4. **File System**
   2. **Hardware Components Required**
   3. **Flowcharts**
4. **DESIGN\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_18**
   1. **Module design and organization**
   2. **UML diagrams**
5. **IMPLEMENTATION & RESULTS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_31**
   1. **Explanation of Key functions**
   2. **Method of Implementation**
      1. **Output Screens**
6. **CONCLUSION\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_39**

**REFERENCES\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_40**