

UNIVERSITI TEKNOLOGI MARA

THE MOBILE TRIAGE TAGS

NURUL ELYANI BINTI ZAINAL BAHARIN

Bachelor of Science (Hons.)

Data Communication and Networking

Faculty of Computer and Mathematical Sciences

April 2010

ACKNOWLEDGEMENT



“IN THE NAME OF ALLAH S.W.T, THE MOST GRACIOUS, THE MOST MERCIFUL“

Alhamdulillah, I am grateful to God that I have finally completed my final year project.

First and foremost, I would like to express my profound gratitude to Allah S.W.T. for giving me courage and energy to finish this project successfully. I would like to thank all these people for helping me either direct or indirectly through completing this project.

My deepest appreciation goes to Pn Zolidah Kasiran as my project supervisor. Thanks for her support, guidance and patience towards the successfulness of this research. Thanks also to the lecturers of ITT 580, Data Communications and Networking Project, En. Adzhar Abd Kadir for giving his guidance and encouragement.

Special thanks to fellow students for their generosity in sharing knowledge and helping me through the development of this project. Moreover, thanks to fellow classmates and close friends for sharing materials and ideas, and last but never least, a sincere appreciation goes to my family for being superbly supportive.

Thank you.

ABSTRACT

Quick response is critical during an emergency situation. Medical care at mass casualty incidents and disasters requires rapid patient triage and assessment, acute care and disposition is often in the setting of overwhelming numbers of victims, limited time, and little resources. Current systems rely on a paper triage tag on which rescuers and medical providers mark the patient's triage status and record limited information on injuries and treatments administered in the field. Hence, this project is run to describes a system based on mobile electronic triage tags that makes victim information available at the base of operations as soon as possible, thus allowing a fast planning of medical resource allocation and immediate action. This novel approach is ready to be used in the worst case scenario, where only small handheld devices carried by the emergency personnel are available. The system has been successfully implemented, showing the feasibility of the proposal. By using this low-budget system, the number of casualties during the triage stage of an emergency is expected to drop off.

TABLE OF CONTENTS

ACKNOWLEDGEMENT	i
ABSTRACT	ii
TABLE OF CONTENTS	iii
CHAPTER ONE: INTRODUCTION	1
1.0 Introduction	1
1.1 Background of the Project.....	1
1.2 Problem Statement	2
1.3 Project's Aim	3
1.4 Scope of Work	3
1.5 Significance of Project	5
1.6 Conclusion	5
CHAPTER TWO: LITERATURE REVIEW	6
2.0 Introduction.....	6
2.1 Triage Tags.....	6
2.2 Current Hospital Triage System in Malaysia.....	7
2.3 Related studies	8
2.3.1 Wireless Internet Information System for Medical Response in Disasters (WIISARD)	8
2.3.2 Tactical Medical Coordination System (TacMedCS).....	9
2.3.3 AMBULANCE	9
2.3.4 DITIS, Networked Collaboration supporting Home Healthcare Teams.....	10
2.3.5 EMTrack emergency system (EMSystems)	10
2.3.6 Traceability System for Sick and Injured in Event of Major Disasters	10
2.3.7 METTAG's MT-137.....	11
2.3.8 Hospital triage systems in the United States.....	11

CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

This chapter provides some overviews of the project. It covers the scope and the objectives of the project. It also covers the significance of developing the mobile-based triaging system.

1.1 BACKGROUND OF THE PROJECT

When there is an emergency situation, for instance after a landslides, conflagration, terrorist event or a meteorological disaster, immediate action is required. Communication networks are normally disrupted in these cases, and this obviously is an obstacle for quick and coordinated assistance. One of the most important tasks after an emergency has occurred is sorting the victims on the basis of need for, or likely benefit from, medical treatment (Super, 1984) (Jones, 2006). After this, aid is allocated based upon these verities of each victim.

Triage Tags is a tool first responders and medical personnel use during a mass casualty incident. It enables first responders to quickly and accurately identify, record, and track the injured at the scene of an emergency. With the aid of the triage tags, the first-arriving personnel are able to effectively and efficiently distribute the limited resources and provide the necessary immediate care for the victims until more help arrives. Another benefit in using the triage tag, besides the fact of improving traffic flow and increasing distributed care among injured patients is during the collection of important data needed by the Emergency Room personnel.

The concept behind triage tags was first introduced by Baron Dominique Jean Larrey, a French surgeon in Napoleon's army. Simple Triage and Rapid Treatment (START) is a strategy that the first responders and medical personnel employ to evaluate the severity of injury of each victim as quickly as possible and tag the victims in about 30–60 seconds. The triage tags are placed near the head and are used to better separate the victims so that when more help arrives, the patients are easily recognizable for the extra help to ascertain the direst cases.