Computing for Human Services

Chief Editor

Shihab Ahmed Hameed

Electrical and Computer Engineering-IIUM University

Editors

Othman Omran Khalifa

Electrical and Computer Engineering-IIUM University

Aisha Hassan Abdullah

Electrical and Computer Engineering-IIUM University

IIUM Press

Computing for Human Services

Chief Editor

Shihab Ahmed Hameed

Electrical and Computer Engineering-IIUM University

Editors

Othman Omran Khalifa

Electrical and Computer Engineering-IIUM University

Aisha Hassan Abdullah

Electrical and Computer Engineering-IIUM University

IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011

Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

ISBN:978- 967-418-161-1

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM
(Malaysian Scholarly Publishing Council)

Printed by :
IIUM PRINTING SDN. BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan

Book Contents

Part II
Computing to Serve Ethical, Social, and Environmental Aspects

Part III
Computing to Serve Healthcare and Medical Aspects

Part IV
Computing to Serve Security and Privacy Aspects

Part V
Computing to Serve Industrial and other Aspects

Chapter 33

Automobile Monitoring and Tracking

Shihab A. Hameed, Othman Khalifa, Aisha Hassan
Faculty of Engineering, International Islamic University Malaysia- IIUM
E-mail: shihab@iium.edu.my

33.1. Introduction

Number of cars is increasing rapidly and so is the number of car theft attempts. There are a lot of car security systems that had been produced lately, but the result is still disappointing as the number of cases still increases. The thieves are inventing cleverer and stronger stealing techniques that need more powerful security systems. Statistics show that 96% of the public are not aware when they hear an alarm. It also shows that the alarm itself does not contribute much in preventing a car theft. These car alarm systems do not cover large areas; the area is just less than 100m[1]. Interpol web on Vehicle crime [2] shows that: vehicle crime is a highly organized criminal activity affecting the whole world. It has been clearly established that it is often linked to organized crime and terrorism. The vehicles are not only stolen for their own sake; sometimes they are trafficked to finance other crimes. They can also be used as bomb carriers or in the perpetration of other crimes [2]. The Interpol General Secretariat has developed the Automated Search Facility-Stolen Motor Vehicle (ASF-SMV) database to support police in member countries in the fight against international vehicle theft and trafficking. As at end of december 2008, the database held more than 4.6 million records of reported stolen motor vehicles as in Figure 1. Close to 151 countries use the database regularly, of whom 122 countries share their national stolen vehicle database records with INTERPOL. In 2008 more than 31,000 motor vehicles have been discovered worldwide through the ASF-SMV database. Figures 2 shows number of stolen cars in Malaysia [3]. Based on our analysis on news archive since previous years, we came out with some important points to be highlighted. It was reported that 8 vehicles are stolen every hour in Malaysia and less than 30% stolen cars were recovered annually. Most popular cars being stolen are Proton Wira, Perodua Kancil, and Luxury cars (Toyota Harrier, Mercedes & BMW)[4, 5]. Stolen cars will be export either as full unit, break into parts for locals and foreign market, modified and sell for locals or ride and deserted somewhere else. There are