A Framework for Automatic Lecturer's Attendance System Using Automated Vehicle Identification (AVI) technology

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ABSTRACT

Automatic Vehicle Identification (AVI) technology can be used to significantly improve the efficiency of lecturer's attendance system by providing the capability of automatic identification and data capture. This technology poses many new challenges on current data management systems. AVI data are time-dependent, dynamically changing, in large volumes, and carry implicit semantics. Radio frequency identification (RFID) data management systems need to effectively support such large scale temporal data created by RFID applications. These systems need to have an explicit temporal data model for RFID data to support tracking and monitoring attendance. In addition, the university needs to have an automatic method to transport data from AVI reader to database. This research proposed a framework for Automatic lecturer's Attendance system using AVI technology. A prototype has been developed to test the framework.

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LIST OF ABBREVIATIONS

AVI	Automated Vehicle Identification
RFID	Radio Frequency Identification
AVL	Automatic Vehicle Identification
AVO	Automatic Vehicle Operation
IVHS	Automatic Vehicle Highway system
UML	Unified Modeling Language

CHAPTER 1

INTRODUCTION

1.1 Introduction

The era of standard situated PCs is over; nowadays more own multiple different computing appliances that can be easily transported (Bertini & Santucci, 2004). People prefer to use the combination of mobile devices and information systems as mechanism to provide automated data capture. Automated data capture has important significant in information systems in various fields. It has gained great attention and being gradually adopted and deployed in wide area applications includes supply chain management, retailing, anti-counterfeiting, security and healthcare (Wang & Liu, 2005).

The current technology for automated data capture is by utilizing the radio frequency identification (RFID). RFID uses radio frequency waves to transfer data between readers and mobile tagged object. This technology works automatically and very fast. It also does not require line of sight or contact between readers and tagged objects (Wang & Liu, 2005). According to Wigan (1994), RFID has been used widely as Intelligent Vehicle Highway System (IVHS). The family includes in this technology are driver communications, automatic vehicle location (AVL), automatic vehicle

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