

Computing for Human Services

Chief Editor

Shihab Ahmed Hameed

Electrical and Computer Engineering-IIUM University

Editors

Othman Omran Khalifa

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Aisha Hassan Abdullah

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Chapter 14

RFID for Hajj Identification Guide Information and Personnel Announcement

Dzul P'zzat Bin Julaihi, Ahmad F. Abdul Rahman and Othman O. Khalifa
Faculty of Engineering, International Islamic University Malaysia-IIUM

14.1. Introduction

The Hajj is the largest annual pilgrimage in the world. This is the fifth pillar of Islam, in which as a religious duty that must be carried out at least once in a Muslim's lifetime. Yearly millions of Muslims from all over the world gather in Mecca in order to perform their Hajj. With the increased number of pilgrims that participate during Hajj, it causes problems and difficulties for the authorities to supervise their whereabouts. For instance, with this crowded gathering, many of the pilgrims lost their ways while performing the Hajj. They only depend on the signboard or directions available in a particular area. There are many dilemmas faced by the authorities in order to prevent these kinds of problems. Firstly, most of the activities of tracking the individual down are depended on physical characteristics of the Hajj authorities, and it may incur high cost. Besides that, the language barrier among the pilgrims causes unpleasant experience since most of the pilgrims are non-Saudis who not very common with the environment while performing the duties. Therefore, it is essential for the Hajj authorities to identify the correct position of each of the pilgrims who need help in order to guarantee their welfare and protection.

Due to this, by involving the RFID technology into the 'systems' that is currently applied in Mecca, it will provide a lot of benefits to the users, especially the Hajj authorities in order for them to monitor every movement of the pilgrims. RFID tag, for example will be used to store the ID about the specific Hajj visitors, so that it will be easier for the authorities to get the details of them within a period of time. An RFID tag is an electronic identification device that made up of chips and antenna. It comes in many different shapes, sizes, and capabilities [1]. The information about pilgrims might comprise ID no., name, group no., country, and contact no. by using RFID readers that might be installed in many places around the specific zone, the detection and tracking process of pilgrims would be easier. RFID readers are also referred to as