

RFID IN ACCESS CONTROL SYSTEM

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Abstract

RFID (Radiofrequency Identification) provides contact less or distant identification. There are basically two main components of any RFID system. One is Tag or Transponder and other is Reader or Interrogator. Each tag contains the information that uniquely points to a person, an object or anything to be uniquely identified. The conversation of a reader with a tag takes place through an RF signal of fixed frequency, to which all system components are tuned. All RF data exchange between the tag and reader is encrypted using a secure algorithm. So the data can't be either read or altered.

RFID technology has been around for years used in everything from office key cards to the Massachusetts Turnpike's E-ZPass transponders. Wal-Mart, Gillette and other major corporations are using it as an advanced barcode to track products from factories to store shelves to checkout counters. Now, trial runs in several industries worldwide to test its potential in the access control arena.

The most important driver in access control is to maintain the security in the hospital and monitor the employee cost is a secondary concern. However many RFID implementations have the potential to maintain security and improve performance of employee while reducing costs e.g. RFID systems identify employee and Track his incoming and outgoing time, absentee etc. RFID tags can be attached to the ID bracelets of all employees so that their location can be tracked continuously. The tag transmits a unique ID to sensors, which identify the person's location in real time.

Keywords: RFID active and passive tags, product tracking, authentication, security