

ABSTRACT

Radio Frequency Identification (RFID) is a compact technology wireless is seeded to transform the commercial world as successor of the barcode. On RFID systems offer increased efficiency control inventory control in the identification of goods. Adoption which extends from the RFID raises many issues in improving services, particularly services self service, reducing the contact-less service, guarantee the ease of transactions, and guarantee the supply and identification of goods.

The purpose of this Final Project is to create an inventory system and service processes customer transactions rental videos using RFID technology so that we can determine how RFID technology can be applied to work in the provision of rental services of video and advantages of this technology compared to the technology used today. Hardware used in the form of RFID tags (customer cards and tags the film) is read by an RFID reader ACR 120U connected to a PC (Personal Computer) in the reading of the database system and also features SMS Gateway using a Siemens M55 mobile phone as a gateway along with its data cable as the system SMS reminders to customers return movies. While the software used is Visual Basic, MySQL, PHP and Gammu.

The conclusion that can be taken from the making of this Final Project is the level of errors and identifies the RFID reading is 0%. Based on test results, the maximum detection distance of an RFID tag to RFID reader customers is 5 cm with a maximum of 60 ° angle to read RFID tags, while for the film is 2.5 cm with a maximum of 25 ° angle reading. While at SMS reminder system returns the film to the customer, speed of delivery from the gateway to the mobile phone on average 3,5 seconds / user while off peak (21:00-09:00) and on peak (09:00-21:00) average 4,2 seconds / user with the delay between sending an sms is 10 seconds. It is expected that the system with a system of RFID-based video rental services are becoming easier pengidentifikasian process customer data, inventory data in terms of movies and an easy transaction.

Keywords: RFID, Visual Basic, MySQL, SMS Gateway