

ABSTRACT

Open Library Telkom University has many facilities that provides the students, on of Open Library facilities which is discussion room. Until now, the procedure for borrow discussion room is far from efficient. After making a order the discussion room via the Open Library Telkom university website, the visitors must have to take the room's key from officers, which in the case are considered to be less effective and efficient in the mindst of advances in information technology that can provide more faster and efficient service.

The final project will optimize the procedure for borrow discussion room without go to take the room's key from officers. The method implemented is to replace the conventional security system and replaced the most effective system with RFID. Users only need to attach the Student Identity Card to the RFID reader for open and use the discussion room, so that making easier to borrow the room. The main devices used to form an RFID system are Arduino Uno, RFID, and Solenoid Door Lock.

The testing of RFID implementation system for borrow discussion room at Open Library Telkom university has been successfully done. The RFID reader can detect all of the Student Identity Card registered in Open Library website with a maximum distance of 4,4 cm in conditions without a barrier between the Student Identity Card and the RFID reader. While the best performance in conditions with the barrier is acrylic with a maximum distance of 4,2 cm. This shows that the RFID system can be implemented for borrow discussion room system at the Open Library Telkom University.

Keywords: Borrow the discussion room, RFID, Discussion room with RFID, Student Identity Card, Open Library Telkom University.