

ABSTRACT

The use of RFID technology at Telkom University is currently the media for presence in the class. However, there are still obstacles that make this RFID system not run according to the system. Student RFID cards are often damaged and RFID readers often don't work. With this system also results in a long queue of students and disrupt the comfort of learning.

In this final project, a presence system is proposed using Bluetooth technology on a smartphone instead of an RFID card and the Raspberry Pi is made as a Bluetooth scanner replacing the RFID reader. This system observes the capabilities of the Bluetooth features on the smartphone as a presence tool and the location of the Bluetooth scanner placed in the classroom.

The design of this system consists of three parts, namely Bluetooth scanner, MySQL, and Presence System Web Application. Where the Bluetooth scanner captures student Bluetooth data through an inquiry scan. Bluetooth scanners also act as a gateway application whose job is to send data to the server. Temporary stored data on MySQL, then this data is displayed on the Presence System Web Application.

The results of the tests that have been carried out for the best performance, namely the placement of Bluetooth scanners and all smartphones in the middle of the classroom, in the two sampling times were 83.33% (15 seconds) and 66.67% (15 seconds) respectively. However, overall in this scenario the system can only detect 83.33% (30 seconds) of student attendance.

Keyword: *Bluetooth, Bluetooth scanner, MySQL.*