ABSTRACT

Parking system in one place with a large quantity of vehicles as well as the campus of ITTelkom (survey 200 cars per day) is required to ensure the safety and comfort of park users either students, faculty, staff and visitors. For current parking system for vehicles type of car in ITTelkom not previously been used although there is parking card for visitors / guests, for it in this final project has been designed and implemented car parking for the campus of ITTelkom for the entrance side and outrance side based on RFID.

In the design and implementation of this parking system using the method of reading from NIK (Nomor Induk Karyawan), amounting to 8 digit numbers and *NIM* (Nomor Induk Mahasiswa) amounting to 9 digit numbers. The used of this parking system can be done by attaching a *RFID* card on the *RFID* reader mounted on the left and right side of the main gate of ITTelkom so it will read the *RFID Tag* that is *NIK* or *NIM*. The *Tag* will be processed by the parking program either at the entrance or outrance gates. If the process is successful so it will display the information about the identity of users and vehicles on the monitor which can be viewed by users with the outside monitors and by the officer with the inside monitor in the room and then the user will be photographed using a camera and stored in the database. Furthermore, the barrier gate will open automatically and the user can enter into the territory of ITTelkom.

For testing was conducted with functionality and performance of parking system that have been implemented. For the functionality has been tested and all components function work properly. While performance is performed to determine the average service time - flat with the results are 2.93 seconds for entrance gate and 2.68 seconds for outrance gate. In order for *RFID* cards can be read properly by the reader, the speed of read is ≤ 4 cm / sec and the distance to the card reader is ≤ 3 cm and with an angle of 90^0 cards in a vertical or horizontal, or just stick to the reader and without electronic barrier.

Keywords: parkir, rfid, database