

ABSTRACT

The rapidly evolving technological advances have provided many conveniences and efficiencies in every human life activity. Near Field Communication is one of the latest communication technologies that utilize radio waves. Near Field Communication technology until now increasingly developed with the technology owned to replace some of the roles of the system that has been running at this time.

In this Final Project implementation implemented a payment system using Near Field Communication technology which is integrated with an NFC reader that is designed to support communication in transaction payment process and a server and virtual bank. For data transfer process Near Field Communication mobile implements a mobile application to integrate data on smartphones with hardware that has been modified as an NFC reader. In the payment process will be the authentication process on the smartphone so that the existing data is a valid user data. In addition, the use of ISO 8583 payment standard which is the liaison of online payment process conducted.

The test results in the smartphone application using Host-based card emulation mode shows the features used run well. With testing a maximum 2cm tapping distance transfer of data by smartphone to NFC succeed with the data read is always the same. In addition to the implementation of ISO 8583 as a standard message that is sent to run in accordance with ISO 8583 format with the format of request and response some data field element 3.7,11,12,13,39,48,70.

Keywords: *near field communication, smartphone, mobile application, smartcard, host-based card emulation mode, server, ISO 8583*