

## ABSTRACT

Recent development on mobile phone technology has enabled users to use free tools for exchanging information. One of those free tools are Bluetooth. This paper suggests elaboration functions on Bluetooth to support promotional campaign in shopping centers. With correct techniques, Bluetooth which is paired with mobile phones would become an effective and efficient marketing media.

This promotional function of Bluetooth works by transmitting information, in the form of data, from server to mobile phones. A J2ME-based application is needed to transfer the data from the server and to receive the data on the mobile phones. The application was designed so it could respond according to the choices of the mobile phones' users. The information could be special discounts, promotions, exhibitions, or products offered by the shopping center. The database system for the information was built on J2SE platform which was connected to server through Local area Connection (LAN). The prototype of the system was being simulated to confirm its reliability on delivering data within certain timeline. Simulations were held with several variable of distance between the server and the mobile phones. The distances used were 1 m, 3 m, 5 m, 7 m, and 10 m. For each variable, the simulations were held for thirty times.

The simulations were held mainly to analyze delay and throughput of the system prototype. The range of the delays is 1407 ms until 11947 ms, while averages of the throughputs fall between 4314,4bps until 35706 bps. The shortest delays were reached during simulations with smallest number of clients and shortest distance between server and clients. On the contrary, lowest throughputs were reached during simulations with most numbers of clients and furthest distance between server and clients.

Keywords : *advertisement, Bluetooth, J2ME*