

## ABSTRACT

The success of Wi-Fi has encouraged the further development, Voice over Internet Protocol (VoIP) on Wi-Fi, later on called Voice over Wi-Fi (VoWiFi). With the existence of VoWiFi, phone calls can be done through the Internet at Wi-Fi areas (Wi-Fi hotspot) with cost saving up to 70% of the international tariffs. Other than that, VoWiFi has given providers the advantages of operational cost saving, scalability and smaller Total Cost of Ownership (TCO) compared with the use of GSM technology.

PT. TELKOM as one of the biggest company in information technology in Indonesia has reacted towards the recent coming of this technology in Indonesia with the launching of TELKOM VoWiFi. TELKOM VoWiFi will be built together with TELKOMHotspot, the hotspot service PT. TELKOM has owned. Although in the current planning the VoWiFi is only meant for TELKOM Hotspot, it is possible for this service to be held in the hotspots of other providers in the near future.

To reduce the error in decision-making, the VoWiFi service needs a feasibility study. The results could be taken for consideration whether the investment for TELKOM VoWiFi will be taken or not. Therefore, in this research, the VoWiFi is tested with three aspects, which are the market aspect, technical aspect and financial aspect.

For the market aspect analysis, a survey through the handing out of questionnaires with the Judgement method towards cellular phone users was done. For the technical aspect, the adjustment for the VoWiFi and TELKOMHotspot requirements was done, followed with predicting the number of hotspot sites and apparatus needed. As for the financial aspect, the VoWiFi service was tested by PT. TELKOM with the separation of the income statement and cash flow of the hotspot service and the VoWiFi service. Thus the value of feasibility for the VoWiFi service was obtained.

From the market aspect analysis, the survey shows that the potential market is 81.2%, and the available market is 74% of the potential market. The taken target market for the first year is 1% and increasing 2% annually. From the technical aspect, it is known the number of sites and apparatus needed to fulfill the demand of TELKOM VoWiFi and TELKOMHotspot. The financial analysis shows that the VoWiFi service is feasible, with the NPV Rp3,017,786,828, PBP 2.10, and IRR 91%.

Key words : VoWiFi, Market, Finance, Feasibility