***ABSTRACT***

*The development of telecommunication technology today leads to Internet Protocol-based technology, Voice Over Internet Protocol (VoIP) is one of the telecommunications technology which capable of passing messaging services, voice into the Internet Protocol network so capable to make telecommunication connections between users connected in the IP network. The advantages, efficiency of bandwidth, efficiency of management costs. In this project will be made a prototype service VoIP Server communication network using Raspberry Pi with the aim as a wireless communication tool can be used to communicate and use of tools is practical, Linux operating system as the main foundation with Raspbian Jessie application and FreePBX based on opensource which integrated into Raspberry Pi. FreePBX in Raspberry Pi which works for IP-based phone service then connects mobile VoIP application and PC to Raspberry Pi as VoIP server, And to test the performance of VoIP service server when making a call. Based on the above description, the authors compiled this report entitled* ***"VoIP Applications with Microcontroller Raspberry Pi at PT Bina Techindo Solution".***