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VOICE OVER IP BASED NETWORK FOR
HAYAKAWA ELECTRONICS PHILIPPINES
CORPORATION

PRACTICUM PROJECT

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HAYAKAWA ELECTRONICS PHILIPPINES CORPORATION**

**Practicum Project
Submitted to the Faculty of the
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De La Salle University
Taft Avenue, Manila**

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SUMMARY

The study on the design of voice over IP based network was conducted at Hayakawa Electronics Philippines Corporation in Rosario, Cavite. The study aimed to select or choose an appropriate VoIP design suitable to the need of HEPC. It was also conducted to identify the hardware and software requirements as well as the cost of the system.

Different VoIP configurations and topologies were presented. Protocols involved when transporting voice over IP based network were also discussed.

The recommended design is a VoIP with Point-to-Point-Protocol (PPP) over a 128 leased line connected back to back. A point-to-point link will be established from Hayakawa Philippines to Hayakawa Japan with six telephone lines connected from both sites. Integration of voice and data, bandwidth consolidation, and minimized long distance charges are some of the benefits that can be derived from this configuration.

Actual parts and equipment are also presented including their estimated cost.



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CHAPTER 1 THE PROBLEM AND ITS BACKGROUND

1.1 Introduction

For years, we can see real revolution in communication world. Everybody begins to use personal computers and Internet for job and free time to communicate each other, to exchange data and sometimes to talk to each other using special applications. Now, a new technology starts to diffuse that can allow real-time vocal communication: the VoIP.

VoIP stands for Voice over Internet Protocol. This means the transmission of voice traffic by using the Internet Protocol(IP). IP is a packet based protocol which means that traffic is broken into small packets that are sent individually to their destination. IP is an attractive choice for voice transport because of its lower equipment cost, integration of voice and data application, lower bandwidth requirements and widespread availability of IP. (Black, 2000)

VoIP was initially deployed to provide lower communication costs by eliminating or substantially reducing long distance charges. By utilizing VoIP applications, voice communications could be transported over the data network, eliminating the need for separate voice communication trunk lines.

Although there are several configuration option for VoIP, it was the purpose of this study to select or choose an appropriate VoIP design for Hayakawa Electronics Philippines Corporation.