Dedication

Personally, I'd like to thank all those who have helped with their advice and efforts ...

To the tender fountain planted in my ambition and perseverance .... My father dear

To the inexhaustible tenderness ... My mother dear

To those with their eyes memories of my childhood and my youth .... My Brothers and My sisters

To the spirit that lived in my soul dear wife, and my flower life

For my parents, friends and everyone, I offer my research.

To all who around me and supported me ...

To all who I forgot to mention ...

With love

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ACKNOWLEDGMENT

I dedicate this thesis to my mother and father. *I would like to thank the Center of Engineering Studies (CETS) family.* Lastly, *I owe a great many thanks to a great many people who helped and supported me during the writing of this research.*

Abstraction

This project will explain the technology transfer voice over the Charter of the web defined and how they work and what are the types of equipment needed to work with the technical explanation of the technical advantages and disadvantages and challenges faced by the technology. The importance of Voice over Internet Protocol and it came as an alternative to the telephone network, the traditional flexibility and led to lower the cost of communication, especially international and because it is easy to use and the offering of features and additional services to facilitate the user performance of the communication in an effective manner and must work to develop and find appropriate solutions to provide this service with high quality. But the application is not easy as it should be on institutions and companies before starting the application process, taking into account the difficulties of the application with the

study of the features and benefits that would accrue to them from it. And also must take into consideration the quality of service (delay - Availability - tension - Reliability – Security).

As the Voice over Internet Protocol is a relatively new technique, it is natural and there are some gaps and disadvantages that there are no solutions have so far. So, they are so far not considered the ideal alternative to traditional phone. And this research is an attempt to provide some of the basics of Voice over Internet Protocol.

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تجــــــــــريد

في هذا المشروع تم شرح ت قنية ذ قل الصوت عبر ميثاق الشبكة وتعريفها وكيفية عملها وأنواعها وما هي المعدات اللازمة لعمل الت قنية مع شرح مزايا الت قنية وعيوبها والتحديات التي واجهتها الت قنية . وتتضح أهمية ت قنية ذ قل الصوت عبر بروتوكول الإنترنت أنها حلت كبديل لشبكة الهواتف الت قليدية لمرونتها وأدت إلى خفض تكلفة الاتصال وخصوصاً الدولية وما ت قدمة من مميزات وخدمات إضافية تسهل على المستخدم أداء الاتصال بطريقة فعالة فيجب العمل على تطويرها وإيجاد الحلول المناسبة لت قديم هذة الخدمة بجودة عاليه. و لكن تطبيقها ليس بالأمر السهل إذ يجب على المؤسسات والشركات قبل البدء بعملية التطبيق الأخذ بعين الاعتبار صعوبات التطبيق مع دراسة المميزات والفوائد التي قد تعود عليهم منه. وأيضاً يجب الأخذ بعين الاعتبار تحقيق جودة الخدمة (التأخير - التوافر - التوتر - الاعتمادية- الأمان).

بما أن ذ قل الصوت عبر بروتوكول الإنترنت يعتبر ت قنية جديدة نسبيا، فإنه من الطبيعي وجود بعض الثغرات والمساوئ التي لم توجد لها حلول حتى الآن. لذا، فهي حتى الآن لا تعتبر البديل الأمثل للهاتف الت قليدي. و يعتبر هذا البحث محاولة لت قديم بعض أساسيات ت قنيات ذ قل الصوت عبر بروتوكول الإنترنت.

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CONTENS

CHAPTER ONE: INTRODUCTION

CHAPTER TWO: LETERATARE REVIEWS

CHAPTER THREE: HARDWARE DESIGN

CHAPTER Four: RESULTS AND DISCUSSIONS

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

Voice Over Internet Protocol	VOIP
Dual Tone Multi Frequency	DTMF
Public Switched Telephone Network	PSTN
Quality of Service	QoS
Internet Engineering Task Force	IETF
International Telecommunications Union	ITU
Global System for Mobile Communications	GSM
Session Initiation Protocol	SIP
Realtime Transport Protocol	RTP
User Data Protocol	UDP
Private (Automatic) Branch Exchange	PABX
Asymmetrical Digital Subscriber Line	ADSL
Wireless Fidelity	WiFi
File Transfer Protocol	FTP

Transmission Control Protocol	TCP
Perr-to-Perr	P2P
Early Steering	Est
Internet Protocol	IP
User Datagram Protocol	UDP
Internet Engineering Task Force	IETF
Service Oriented Architectures	SOA
Post Office Telephone Systems	POTS
Personal Digital Assistant	PDA
Dual Tone Multi Frequency	DTMF
Caller Identification	CID
Personal Computer	PC
Universal Mobile Telecommunication System	UMTS
Internet Service Provider	ISP
Local Area Network	LAN
Integrated Services Digital Network	ISDN
Private Branch Exchange	PBX
Joint Academic Network	JANET
Wireless Local Area Network	WLAN
Hyper Text Transfer Protocol	HTTP
Graphical User Interface	GUI
Information And Communication Technology	ICT
Further And Higher Education	F&HE
Instant Messaging	IM
Short Message Service	SMS
Radio Frequency	RF
Frequency Modulation	FM
Integrated Circuit	IC
Electromagnetic Field	EMF
Light Emitting Diode	LED
Universal Link Negotiation	ULN
Reservation Protocol	RSVP
SPAM Over Internet Telephony	SPIT
Interactive Voice Response	IVR
Internet Relay Chat	ICR
Worldwide Interoperability for Microwave Access	WiMAX
Open Systems Interconnection	OSI
RTO Control Protocol	RTCP