An Application Based on Voice Over IP

(Implementation Of Protocols)

Developed by

Ch. Waseem Fazal (MCS)





Supervised by Mr.Rashid Kareem

A report is submitted to the department of Computer Sciences, Bahria Institute of Management and Computer Sciences, Islamabad.

In the partial fulfillment for the degree of MCS

Department of Computer Sciences

Bahria Institute of Management and Computer Sciences, Islamabad University Of Peshawar, Peshawar

Acknowledgement

With the generous help of Almighty, this project is now in its final form. We are deeply indebted to our supervisor, Mr. Rashid Kareem and Mr Fazal e Wahab who guided us with valuable suggestions, tips and useful comments which helped us in improving the quality of our project to a great extent. Without their support and guidance we would have never been able to complete our project. We are grateful to the Director of Bahria Institute of Management and Computer Sciences for providing us the Computer Laboratory facilities and the necessary equipment used in our project.

We are also thankful to all the staff members of Informatics Gallery and AKSA-SDS who provided us the necessary information without which the study could not have been carried out.

We can not forget to thank all our teachers who taught us in the Masters Program of Computer Sciences at Bahria Institute of Management and Computer Sciences. We are also thankful to the staff members of Informatics gallery and AKSA-SDS who always cooperated in a friendly environment.

We are very much thankful to our parents, who always prayed and encouraged us to complete the project.

Certificate

We accept the work contained in this report as a confirming to the required standard for the partial fulfillment of the degree MCS in

Head Of Department

Interna Examiner

Supervisor

External Examiner

for hed

Abstract:

This project is about the research and implementation of an application based on the Voice over IP technology. The purpose of the application is to show how two or more terminals can communicate with each other through IP addresses on a local and wide area network. The mode of communication can either be Voice or Text messages.

The project consists of the following deliverables:

- A detail research report of Voice over IP.
- The existing technologies and tools used in the development of VOIP.
- System Analysis and Design of the application.
- Object Oriented analysis and design.
- Brief description of the code.
- System interface and User manual.
- Testing and further implementation.

Contents

	1
Chapter 1	2
1.1 Introduction	
	3
Chapter2	4
2.1 Definitions	4
2.2 Brief History	4
2.3 Key Features of Voip	
	6
Chapter3	7
3.1 Project Objectives	7
3.2 Current Tools	8.
3.3 What is a Wave File	9
3.4 Why Use Wave Form	
	12
Chapter4	13
4.1 What the application strives to achieve	14
4.2 Difference between our application and existing	
applications	15
4.3 Hurdles/difficulties we came across during our	
municat	16
4.4 The different tasks which I performed in this project	
	17
Chapter5	18
5.1 System Analysis and Design	19
5.2 Object Oriented Analysis and design in UNIL	17
(A revolutionary Approach)	19
Use Case Diagram of VoIP	23
Conceptual Models	28
Sequence Diagrams	
Collaboration Diagrams	32
Class Diagrams	34
5.3 Flow Chart	36
	42
Chapter6	42
6.1 System Architecture	43
6.2 Class Description	45
0.2 0	50
Chapter7	50
7.1 Operation Flow Chart	51
7.2 System Interface and Implementation	50
	6.
Chapter8	6
8.1 Testing and debugging	0

	66
Chapter9	67
9.1 Conclusion 9.2 What we have learned from this project	67
9.3 Way to Improve Voip	67
	68
Chapter10	69
10.1 Advanced Applications	70
10.2 H.323 Umbrella Structure 10.3 Text To Speech	83
10.5 Text 10 Specen	

References

85