FEASIBILITY STUDY

Wi-Fi Communication Platform

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1. Introduction

1.1 Overview of the Project

This is about sharing files and communicating without data charges using Wi-Fi in a user-friendly environment. So, the users can communicate with this like a messaging application with file sharing functionality in a local area network using Wi-Fi.

Main task is to develop windows application for personal computers. It is hope to developed for android and Linux in future.

In this system user's messages or data are the inputs and output is to send it to the destination person or the group of people.

1.2 Objectives of the Project

Objective of this project is to provide a simple and easy interface to the users to share the data and communicate via Wi-Fi. This system will provide a solution to fast file sharing and free chatting in a Local Area Network.

1.3 The Need for the Project

Nowadays people are using devices like laptops and mobile phones that has Wi-Fi functionality. But in computers it is still been used Bluetooth stock application if needed to share some files wirelessly. It is slow and not a much user friendly process. If this is done by Wi-Fi it will be faster than Bluetooth. Another problem in such applications that are already exist ask for another connection for that. But in this system, will be developed to use sharing functionality without having another network connection by using Wi-Fi hotspot of a using device.

1.4 Overview of Existing Systems and Technologies

Existing systems: Feem [1], Skype [2], Whatsapp [3], Viber [4], Facebook messenger [5]

Main differences with existing systems

Existing system	**Existing system feature difference**	**This system feature**
Feem	*Limited functionality to free users	*All functionality given for free and *Voice messages are available
Skype, Whatsapp, Viber, Facebook messenger	*Data charges apply *Can access anyone in the world *Providing real time calling	*No data charges *Can only access in the local network *Not Providing real time calling

This system will be developed using:

C# [6], Visual studio 2015[7], Metro UI framework [8]

1.5 Scope of the Project

Main user roles: 1. Sender
2. Receiver (in a conversation a person can act as both)

Anyone in the same network can use this system.

Main functions:

1. Register user profile	2. Edit user profile
3. Create a hotspot	4. Connect to the network
5. Sending text messages	6. Receiving text messages
7. Sending files	8. Receiving files
9. Send voice	10. Receiving voice
11. Check conversations	12. Delete conversations

1.6 Deliverables

This system will deliver a Standalone windows pc application for sending and receiving messages and see the conversations.

2. Feasibility Study

2.1 Financial Feasibility

Since this project is done by freeware this project doesn't have a cost for develop tools.

So, the system is financially feasible.

2.2 Technical Feasibility

This system will be developed using:
C# [6], Visual studio 2015[7], Metro UI framework [8]

Using C# language, it can be easily implemented the network handling part of this system.

With Metro UI framework it is expected to create a user friendly smooth User interface.

So, the system is technically feasible.

2.3 Resource and Time Feasibility

- Hardware requirements: the system will run on Windows PCs with Wi-Fi connections. No other hardware is needed.
- Software requirements: the system needs .net 4.0
- Time requirement: 5 months for completion of the system.

2.4 Risk Feasibility

- Risk: Main risk in this system is to keep the privacy of users and keep secure their transferring information (conversation and files) because of using a network is a key for hackers to steal others information.
- Risk mitigations: the data that transfers in the network will be encrypted. It is expected to have an end to end encryption system for the application.

2.5 Social/Legal Feasibility

Social or legal constraints are not impacted in the scope of this project because the system doesn't violate any law.

So, the system is legally and socially feasible.

3. Considerations

- Ease of use: this system is mainly concerns about the user interface as a Wi-Fi technology application. Many applications that being used to share files have poor user interface and not user friendly. So, this application will provide a better UI as a conversation type interface that anyone can easily understand and familiarize with the system.

- Security: the system is expected to keep in high security over the connected network through encrypted data transferring.

4. References

[1] FeePerfect “Faster Transfers” Internet: http://tryfeem.com/ [Feb. 08, 2017]

[2] Skype and/or Microsoft. “Celebrate the season together, wherever you are” Internet: https://www.skype.com/en/ 2017 [Feb. 08, 2017]

[3] WhatsApp Inc. “Simple. Secure. Reliable messaging.” Internet: https://www.whatsapp.com/ 2017 [Feb. 08, 2017]

[4] Viber Media S.à r.l. “Viber Connect. Freely.” Internet: http://www.viber.com/en/ 2017 [Feb. 08, 2017]

[5] Facebook. “Messenger” Internet: https://www.messenger.com/ 2016 [Feb. 08, 2017]

[6] Microsoft. “C#” https://msdn.microsoft.com/en-us/library/kx37x362.aspx 2017 [Feb. 08, 2017]

[7] Microsoft. “Any Developer, Any App, Any Platform” Internet: https://www.visualstudio.com/ 2017 [Feb. 08, 2017]

[8] Dennis Magno. “Metro Modern UI - Metro Framework 1.4.0” Internet: https://www.nuget.org/packages/MetroModernUI/ July. 19,2016[Feb. 08, 2017]