



Audio-Video & Text Conversation System Using Wireless LAN

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ABSTRACT: Nowadays communication is most essential among the groups or individual for exchanging their ideas and for expressing themselves. To communicate we need pay certain amount for getting a talk time or internet so that we could connect to the people we desire to communicate. Sometimes it may happen we don't have network coverage in colleges and some remote areas due to some natural calamities, so the communication won't be possible in that circumstance, and this will lead to a communication gap at certain important instance which is not affordable. To-Talk is a system which provides a platform where we can communicate with each other by means of Voice calling, Video calling & Chatting (Text). To-Talk make it possible to communicate over LAN without using the internet. This make the communication at almost negligible price. The communication is possible when the device is connected to same LAN. The system is user friendly and it is easily possible to set up a LAN rather than network cellular tower. This type of communication is mostly suitable for educational institutes or a company.

KEYWORDS: Wireless Local Area Network (LAN) , Range of that Router.

I. INTRODUCTION

Voice over LAN has presented a unique opportunity for enterprises. The convergence of the merging of knowledge networks and voice networks over a standard IP infrastructure – offers a dramatic reduction within the capital and operational expense of maintaining separate voice and data infrastructures. Beyond these cost savings, the power to host voice and data on an equivalent network provides improvements whereby data applications can leverage different multimedia capabilities, while voice and real-time multimedia applications are ready to cash in of rich enterprise data features which will enhance communications during a manner which will reduce the necessity for costly face-to-face meetings. Additionally, convergence can cause a singular synergy leading to the event of the latest real-time applications. An important element that's missing from this equation is mobility.

Given its end-user acceptance, it's not surprising that wireless LANs have come as a growing part of the enterprise communications landscape. Early issues like security are addressed and corporations are now systematically consolidating access points into wireless enterprise infrastructures. Wireless networks were originally designed for the wireless transmission of knowledge. Therefore, adding voice and video presents several challenges that have got to be resolved before the voice WLAN can supplant traditional wireless voice solutions.

II. RELATED WORK

Requirement Analysis

Communication is most essential among the groups or individual for exchanging their ideas and for expressing themselves. To communicate we need pay certain amount for getting a talk time or internet so that we could connect to the people we desire to communicate. Sometimes it may happen we don't have network coverage in colleges and some remote areas due to some natural calamities, so the communication won't be possible in that circumstance, and this will lead to a communication gap at certain important instance which is not affordable.

To-Talk is a system which provides a platform where we can communicate with each other by means of Voice calling, Video calling & Chatting (Text). To-Talk make it possible to communicate over LAN without using the internet. This make the communication at almost negligible price. The communication is possible when the device is connected to



same LAN. The system is user friendly and it is easily possible to set up a LAN rather than network cellular tower. This type of communication is mostly suitable for educational institutes or a company.

3. Hardware and Software requirements

Hardware requirements:

CPU: Intel Core i3 5th gen or above

Ram: 2 GB or above

HDD: 5 GB or more

Software requirements:

OS: Windows 7, 8, 10

III. METHODOLOGY

1. Providing real-time communication like voice or video over WLAN is a technically challenging task.
2. The users of mobile devices expect at least the same functionality and performance they receive from traditional voice solutions.
3. However, wireless networks were originally designed for the wireless transmission of data.
4. In any large organization where communication is tougher because of the wide area, the proposed system serves as a great alternative.
5. Using this system the message can be broadcasted on LAN to all the members of the organization.
6. This AV & Text communication provides a platform to communicate without using Internet or Mobile signal.
7. The communication will occur by using a wireless LAN.
8. Both the devices should be connected to same wireless LAN.
9. There are two devices called as sender and receiver.
10. Sender needs to have the IP address and port of receiver.
11. Receiver should be ready with port number for commencing the communication.
12. Once connection is established peer to peer or broadcast communication can be started over Audio-video or text.
13. . The members can be grouped and messages can be broadcasted to the required group only. This can also be used to broadcast to a single member in the network.
14. Since it requires the registration before receiving the message from the server which provides a great security.
15. The possibility of attaching files as pdf, Windows office documents and also pictures of JPG and PNG format gives an easier way of communication.

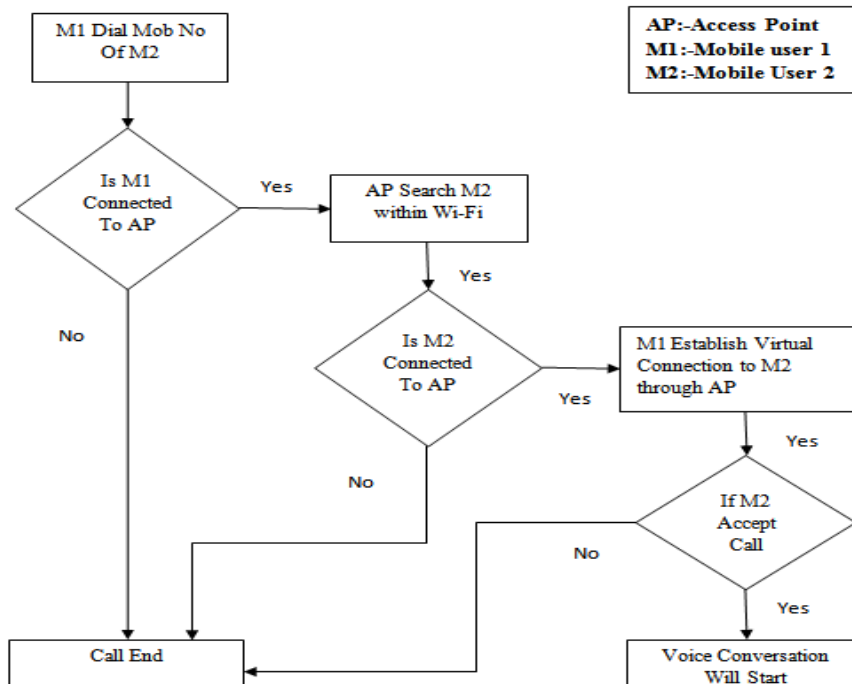


Fig. 1.Flow Chart

IV. RESULTS

We can see the screen interface of the application TO TALK (exchnage of text over wireless LAN). Here sender have to add the receivers IP address and thier name. Receiver has to the do the same i.e add sender’s name and IP address to establish a virtual connection. When any one of them send a message other will get the view of that message on and they can reply from the same interface.

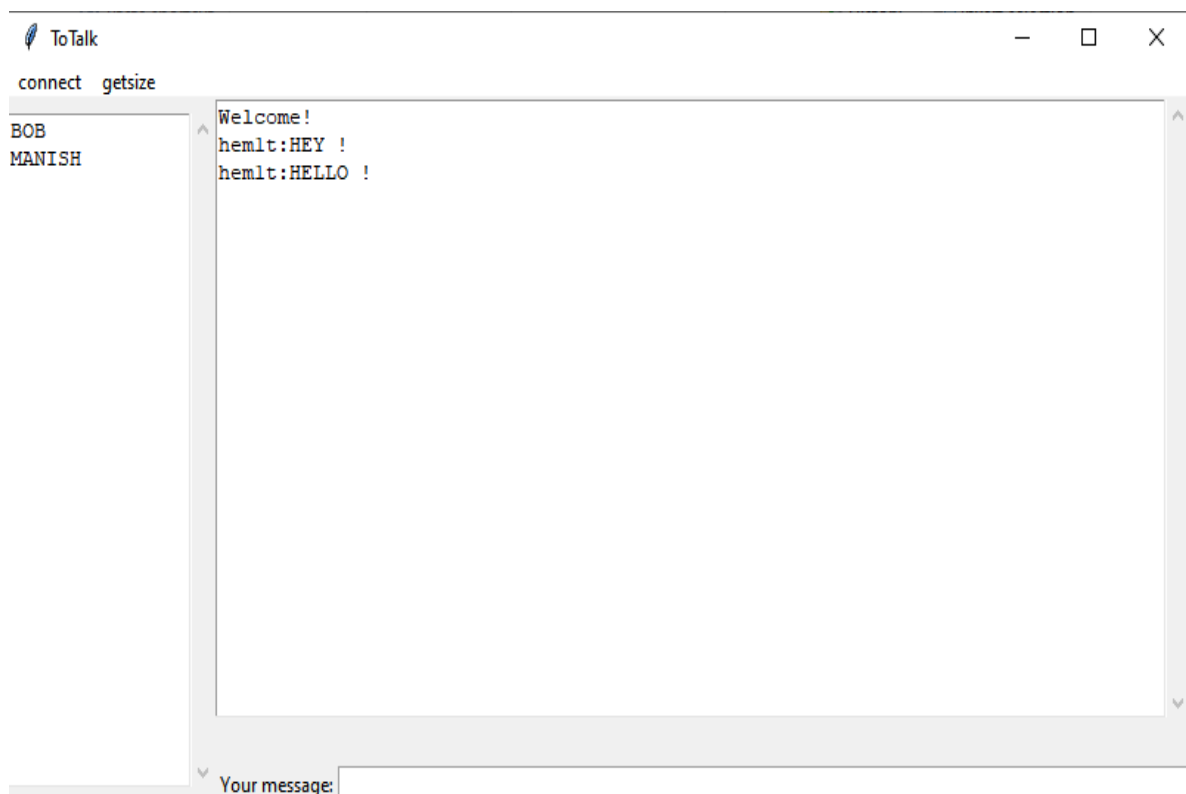


Fig.2 Screen UI



V. CONCLUSION

Currently systems are available in market for inexpensive communication. However they have constraints like need for internet connection. system. As it requires only wireless router, pc & doesn't require internet connection, this technique is extremely cost effective. It is easy to line up the system as no additional wiring is required just in case of conventional system used for communication. This system are going to be of great use in small scale industries also as educational institutions. It will be helpful as cut means facilitate audio video communication. It can be possible to design a application for device such as Android mobile by which we can communicate with other using SIP-based VoIP. The main purpose of this paper is to establish one to one communication between sender and receiver over wireless Local Area Network(LAN) with minimum charges. The system will allow users to look for other individuals within WIFI range and to determine free peer to see connection for speech .

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