



Web Conferencing Application

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ABSTRACT

Over the past few years, video conferencing (VC) has become more popular and more reliable as a tool to bridge the distance gap when travel is not an option, impractical or undesired. Video conferencing uses audio and video telecommunications to bring people at different sites together. Video conferencing software is a tool used by two parties to communicate via video and audio using an Internet connection. It enables the parties to initiate and conduct live conferences and remote meetings by transmitting audio, video, and text. In this paper, an introduction to video conferencing is presented with an emphasis on its application in distance learning.

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1. INTRODUCTION

It is only recently that technology has reached a level of stability, usability and affordability which permits its use in real teaching scenarios rather than research projects. The use of video is being hailed as the next advance in electronic communication. Many companies are developing systems to support such concepts as virtual teams,

zoom, google meet, telecommuting, and remote conferencing etc.

Video conferencing has recently become increasingly popular and disperse in the wake of faster and cheaper internet connections and better technologies. Modern standalone video conferencing units provide advanced video and audio quality due to more efficient compression and can function over normal broadband internet

connections. Growing processing power and cheaper accessories, such as webcams, have also made it possible to participate in a video conference using dedicated software on a normal personal computer without any expensive special hardware. With the budget stretched to the breaking point, a number of business premises and institutions are settling aside their travel plans and turning to web conferencing in order to save money and time. Video conference participants use either VC system, web based application or on premise software to interactively communicate with co-workers, students and others in virtual meetings or classrooms. This approach is easier, cheaper and much more convenient to use while also providing easy access to file sharing and variety of others collaborative services.

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A. Objectives

- Companies and individuals are increasingly using virtual meeting and chat services, especially in these times of increased home working.
- This App has a very light, fast interface and enables you to easy manage up to 250-person meetings.
- These apps form communications services that enable text, voice, or video chats, either one-on-one or in a group.

II. METHODOLOGY

Videoconferencing is a method of communicating between two or more locations in which sound, vision and data signals are conveyed electronically to enable simultaneous interactive communication. Much more personal and effective than audio conferencing, all parties involved can see the facial expressions and body language that

are so vital to the way we communicate (JNT Association, 2007). Video conferencing works by using a few different technologies. Some of these technologies are hardware while others are software related. A Video conference can be between two sites, i.e. locations which are connected to each other via the video conference, or the conference can connect multiple locations. The communication can take place in a special video conferencing studio, or on a normal home computer equipped with a webcam or even a video call on a modern 3rd generation mobile phone falls into this scope (Roberts, 2009). Besides the audio and visual transmission of meeting activities, allied videoconferencing technologies can be used to share documents and display information on whiteboards

To developed a user-friendly conferencing application which help to interact with other people also to manage the user data. 1. This app is built to let dozens of people join the same virtual meeting, and speak or share video with each other from anywhere with internet access.

2. This App as "a video meeting experience with one goal: make joining meetings effortless". The company wanted to improve Hangouts to make it easier and faster for people start and join video conferences.

3. Meet offers native, full-screen presenting, which makes it easy to showcase your team's projects, although the sharing options aren't as dynamic as those you'll find in this application. although there is the useful option to share a single.

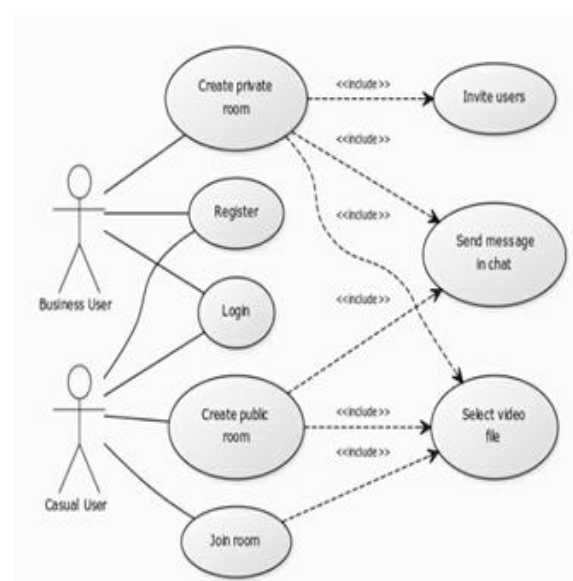


Figure 1: Proposed System

III. MODELLING

A. Login/Register Module

The registration and user profiles add additional security value and make a video chat app more user-friendly and person-oriented. It's better to provide a user with a choice between sign-up via social networks or fast manual registration. After the registration, your users receive an opportunity to customize their profiles by adding personal info, profile picture, network status, etc.

B. Video Mode

Video Mode is an online technology that allows users in different locations to hold face-to-face meetings without having to move to a single location together. This technology is particularly convenient for business users in different cities or even different countries because it saves time, expenses, and hassles associated with business travel. Uses for video conferencing include holding routine meetings, negotiating business deals, and interviewing job candidates.

C. Screen Sharing

Screen sharing involves sharing access to a given computer screen. Screen sharing software uses many different methods to allow sharing a screen remotely with a second user for collaboration purposes or other objectives.

D. Room Chat

Chat rooms are Web sites or programs that allow people to send text messages to one another in real time. The chat room works as a virtual room, where groups of people send messages that others can read instantaneously.

E. Virtual Noise Cancellation

Since remote work has become a new normal, virtual noise cancellation is necessary when developing a custom video chat app. With the help of deep learning algorithms, engineers can separate a user's voice from the background and suppress the background sounds with white noise.

F. Toggle Audio/ Video

Depending on your meeting type, you may not see every option.

- Use computer audio—Click Switch to connect audio using your computer. This option gives you the highest audio quality for the most robust meeting experience.

- Call me at—Enter a phone number and click Switch to have the meeting call you. Connecting to the meeting on your phone gives you the freedom to move around while still being able to participate in the meeting discussion.

- Call in—Click View to see a phone number and access code to connect audio on your phone. Much like Call me at, calling in lets you call into the meeting when you're ready to join.

IV. RESULT

Real-Time Engagement Platform provides reliable worldwide coverage with ultra-low latency, scalability, and flexible interactive features. Our easy-to-embed APIs, broad range of SDKs, and partner ecosystem help user to embed voice, video, real-time messaging and recording solutions quickly and cost-effectively.

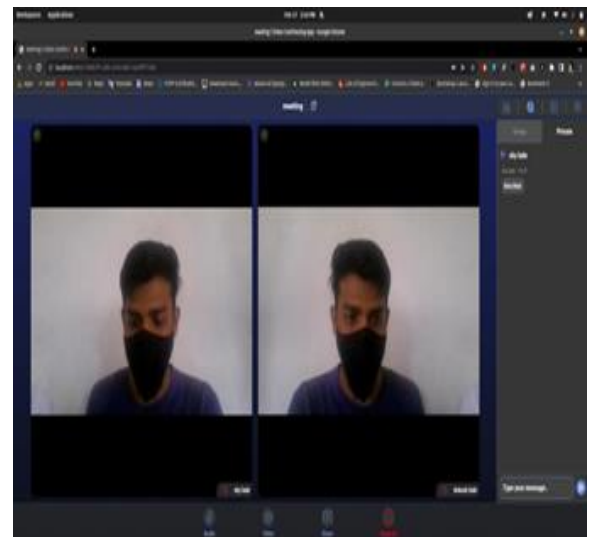


Figure 2: Video Mode

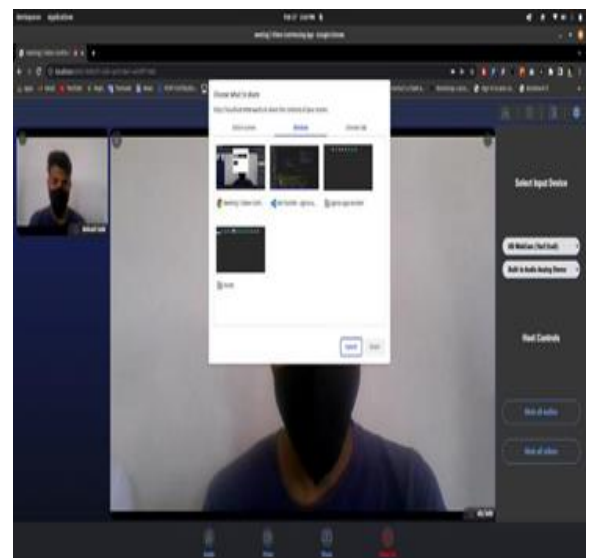


Figure 3: Screen Sharing



Figure 4: Host Control

V. BENEFITS OF VIDEO CONFERENCING

- Enable the Digital Workforce
- Simplify Management and Usability
- Rally Communication and Culture
- Increase Communication Reliability
- Improve Value and Reduce Redundancy
- Sharing of presentations
- It allows immediate, full two-way communication of content, verbal, pictorial objects etc.
- Greater access to experts/specialists (nationally and internationally)
- More productive use of time (eliminates wasted travel time) and significant travel cost savings.
- Reduced environmental impact through less travel and reduced pressure, stress and fatigue from travel.

VI. APPLICATION OF VIDEO CONFERENCING

- Teaching: VC allows easy access to remote expertise. When the number of expertise is small, one lecture can teach various virtual classes at a go thus, travelling to various campuses is significantly reduced.
- Meetings: Using VC leads to cost savings on travel, accommodation and staff time. Several sites can be linked together. Having a set time and duration for a meeting encourages punctuality and focused discussion.
- Data sharing: Images from a personal computer (PC), such as spreadsheets, PowerPoint illustrations etc. can be shared to enhance a presentation.

- Interviews: Cost savings can allow more candidates to be interviewed from remote locations. With data sharing, CVs can be viewed and discussed online.
- Telemedicine: In rural areas, specialist medical help may not be available on hand. By linking to a regional centre, cottage hospitals and clinics can receive help in diagnosing patients' disorders.
- Legal work: VC helps reduce intimidation of vulnerable court witnesses. Particularly sensitive cases e.g. children or rape cases can be made more acceptable by separating the victims physically from the court.

CONCLUSION

Video conferencing could lead the way for a dual approach, giving students more responsibility for their learning, working in groups, and doing educational tasks; all of which would benefit conventional teaching, but video conferencing provides an opportunity to implement them. It does not replace the use of print or other methods used in the conceptualization process. It can be used to encourage construction and its true use lies in encouraging dialogue and increasing the scope for dialogue. With the advancement and ease of availability of high speed and cheap internet connections, it is expected that video conferencing will increasingly become popular thus, leading to more interest and use of distance learning. In this paper, an introduction to video conferencing and its application in distance learning was presented as an effective way of delivering subject matter in classrooms.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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