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Telephone Call Authorisation by using Yarn

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ABSTRACT: In the last decade, video conferencing (VC) has grown significantly in popularity and reliability as a means to connect people across geographical distances when inperson meetings are impractical. VC employs audio and video telecommunications to facilitate real-time, face-to-face interactions among individuals situated at different locations. The study of technical prerequisites and practical uses of video conferencing has emerged as a prominent research focus, especially in the realm of distance education.

This paper offers an introduction to video conferencing technology and its expanding applications. It covers the fundamental elements of a VC system, such as cameras, microphones, displays, codecs, and network infrastructure. Additionally, it examines how video conferencing is revolutionizing distance education by enabling synchronous interactive learning experiences between instructors and remote students.

KEY WORDS: e-learning, information technology, students, standards.

I. INTRODUCTION

Recently, technology has achieved a level of stability, usability, and affordability that allows its practical use in teaching rather than just research projects. The integration of video is seen as a significant advancement in electronic communication. Numerous companies are creating systems to facilitate virtual teams, telecommuting, and remote conferencing (Sam, 2008). Video conferencing has gained popularity with the proliferation of faster, more economical internet connections and improved technologies. Contemporary standalone video conferencing units offer enhanced video and audio quality through more efficient compression techniques. Video conferencing can operate over standard broadband internet connections. Advances in processing power and the affordability of accessories like webcams have made it possible to join video conferences using specialized software on a regular personal computer without the need for expensive hardware. With tight budgets, many businesses and institutions are forgoing travel plans and opting for webbased interactions through VC systems, web applications, or on-premise software to communicate with colleagues, students, and others in virtual meetings or classrooms. This method is more cost-effective, convenient, and provides easy access to file sharing and various collaborative services. The increase in bandwidth availability now supports greater interaction in virtual classrooms via video conferencing (Dr. Lynne, 2007). Educators can use these video conferencing technologies to create a more interactive distance learning experience by offering real-time, two-way video, voice, and data communication to remote students, rather than relying solely on traditional electronic media. All participants can observe the essential facial expressions and body language that play a crucial role in communication (JNT Association, 2007). Video conferencing employs various technologies, including both hardware and software components. These conferences can occur between two locations connected via video link or can involve multiple locations simultaneously.

Marvin Minsky coined the term
"teleconference" in a 1980 article where he described his vision for a modernized version of the older teleoperation concept. His focus was on creating a sense of actual presence for remote participants.

In 1942, Robert A. Heinlein's science fiction story "Waldo" introduced an early concept of a teleconference master-slave manipulator system. Minsky later referenced this in his influential paper, stating, "My first vision of a remotecontrolled economy came from Robert A. Heinlein's prophetic 1948 novel, Waldo." However, Minsky's paper incorrectly cited the publication year of "Waldo."

In 1969, Fred Saberhagen's novel "The Brother Assassin" introduced the comprehensive idea of a teleconference master-slave humanoid system. The novel describes the concept as follows: "And a moment later it seemed to all his senses that he had been transported from the master down into the body of the slave-unit standing beneath it on the

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floor. As the control of its movements passed over to him, the slave started gradually to lean to one side, and he moved its foot to maintain balance as naturally as he moved his own. Tilting back his head, he could look up through the slave's eyes to see the masterunit, with himself inside, maintaining the same attitude on its complex suspension."

The first commercially successful teleconference company, Teleport (later renamed TeleSuite), was established in 1993 by David Allen and Harold Williams. Prior to TeleSuite, they managed a resort business and noticed that businesspeople frequently cut their stays short to attend crucial meetings. Their innovation was to create a technology that allowed businesspeople to participate in meetings without leaving the resorts, thereby extending their hotel stays.

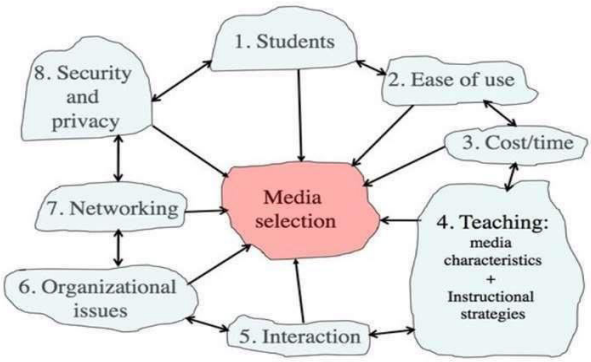

Figure 1. Overview of technology-based learning categories Source: Bates & Poole,2003

VIDEO CONFERENCING TECHNOLOGIES AND STANDARDSA
The following section provides a brief overview of the standards used for video conferencing.

Table 1. Names of standards for video conferencing technologies

Technology	Name of the standard
H.310, H.320 (ISDN Networks)	
H.321, H.323 (since 1996)	
Signal transmission H.324 (PSTN)	
H.324m (3G or UMTS)	
SIP (VoIP and Video Calls)	
H.261 (introduced in 1988) H.261 Annex D	
H.263	
H.264 (MPEG 4 AVC)	
G.711, G.722 and modifications G722.1	
G.722.1 Annex C	
G.723.1, G.725	
G.728, G.729, G.703	

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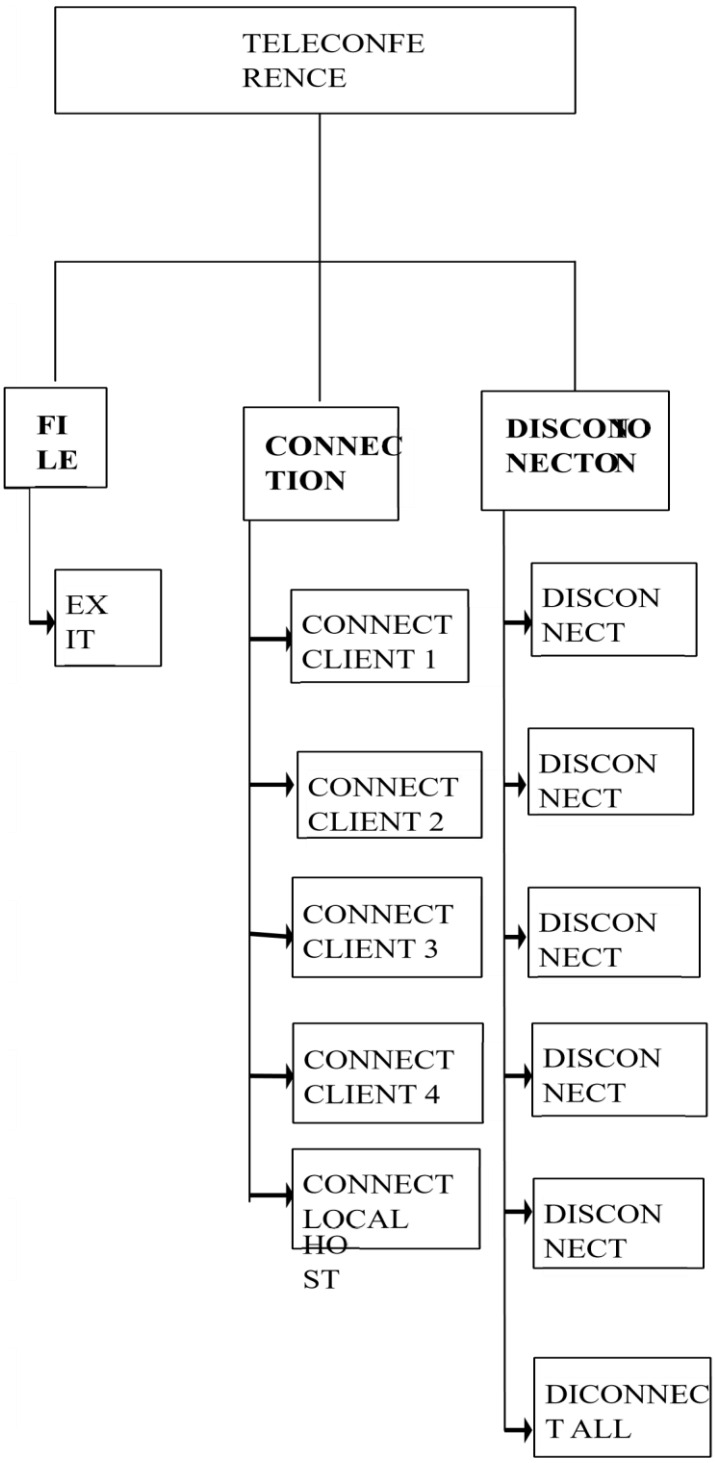

II. METHODOLOGY

TOP DOWN DESIGN

This is usually a guideline system for solving a Issues with particular elements like stages, assignments, methodologies, techniques, and tools. It involves the specification of procedures for collecting and analyzing data necessary to define or solve the problem for which the research is embarked upon.

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Here, connection provides a drop down menu where different clients including the host can connect to each other. Unlike connection, disconnection provides a drop down menu where the different clients including the host can disconnect from each other

Data Collection
This project was achieved by gathering materials from different sources. One of the invaluable sources of data was oral interview, which I conducted with stake holders in industries and prospective users of similar systems.

Another source that gave me a wealth of information was the internet, which provided some details used to analyze some key issues.

Several web sites were willing to let go vital information on teleconference.
The state and federal library were also resourceful in these achievements.

III. OUTCOME OF RESEARCH

The outcomes of the video authorize project, though not yet published, are anticipated to be significant in enhancing security and access control mechanisms. This project aims to implement a robust system for authorizing and authenticating users via video technology, leveraging advanced facial recognition and biometric verification. Expected benefits include heightened security through multi-factor authentication, reduced incidences of unauthorized access, and streamlined user experiences by allowing quick and efficient access approvals. Additionally, the project is poised to provide valuable insights into the effectiveness of video-based authorization in various applications, potentially Establishing new benchmarks for digital technology security protocols across multiple industries.

IV. EXPERIMENTAL RESULT

The outcomes of the video authorize project experiment, though not yet published, are anticipated to be significant in enhancing security and access control mechanisms. This project aims to implement a robust system for authorizing and authenticating users via video technology, leveraging advanced facial recognition and biometric verification. Expected benefits include heightened security through multi-factor authentication, reduced incidences of unauthorized access, and streamlined user experiences by allowing quick and efficient access approvals. Additionally, the project is poised to provide valuable insights into the effectiveness of video-based authorization in various applications, potentially Creating new benchmarks for digital innovation security protocols across multiple industries.

V. CONCLUSION

Computerization of a video conference is an important aspect to consider in the live of every organization. A situation where meetings and other crucial gatherings such as conference, lectures media briefing and others can be actualized by a single click of the mouse is not just interesting but a sought after. This work has contributed in the development of computer based Teleconference system. A working model of the work was submitted alongside this report.

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