**VIDEO CONFERENCE: IT APPLICATION IN OPERATION OF A BUSINESS**

**EMMANUEL ISTIFANUS**

**(ST/CS/ND/21/084)**

**A SEMINAR PRESENTED TO THE DEPARTMENT OF COMPUTER SCIENCE, SCHOOL OF SCIENCE AND TECHNOLOGY, FEDERAL POLYTECHNIC MUBI, ADAMAWA STATE, NIGERIA**

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**Abstract**

*Video conferencing is a major part of doing business in the 21st century. It is very true that all businesses must pay employees' travel time, transportation, hotel, and food expenses in order for them to attend meetings in person, and it is very clear how these expenses can add up. And when employees are on the road or in the air, the organization loses hours of productivity. Video conferencing provides a better option for many of today's business owners. Video conferencing is a technology that integrates audio and video, allowing employees to see and talk to each other as effectively as they were in the same room. The advantage is that they are actually miles, even continents, apart. Once the business starts taking advantage of video conferencing, travel time and all the cost associated with it are eliminated, Important decisions can be reached quickly, and meetings can be called spontaneously whenever opportunities arise With Video conferencing, no need to wait for anyone to meet face to face. Video conferencing accelerates the decision-making process.*

**Keywords:** Video conferencing, Information technology, E-business.

**Introduction**

Video conferencing is a major part of doing business in the 21st century. It facilitates visual communication with clients and colleagues anywhere and anytime. Moreover, a video call can save energy and money, and reduce environmental impact in some surprising (but significant) ways. With all the benefits, no wonder online meetings have become a go-to mode of communication for many businesses worldwide (Whittaker, 2015).

Both decision making and decision execution are dependent on the quality of communications. (In most business situations, fast execution will trump lengthy strategic planning every time). Better communications lead to better decisions, and better results implementing those decisions. Conferencing and collaboration tools can help your company respond quickly to customer demand, solve customer support issues, react to market opportunities, and battle competitive threats. Whether you consider an investment in conferencing to be a way to cut costs or to increase productivity, these tools will soon join the ranks as necessary tools for your company to compete in the worldwide economy. So, the question is not whether or not to invest in conferencing and collaboration, but rather which types of applications make the most sense for your company (Cavus & Danieil, 2021).

The success of any enterprise ultimately rises and falls on the quality and speed of its decision making. Enterprises that fail to use modern communications technologies, that do not leverage the knowledge base of workers, and limit the potential for collaboration, run the very real risk of falling behind their competition. This fact has not been lost on the large enterprise software and infrastructure vendors like Avaya, Cisco, IBM, Microsoft, Nortel, Oracle, and Siemens. Many of these companies have not just introduced conferencing and collaboration products, but have set up entire business divisions to provide their customers with a full range of audio-video-web-presence-based solutions. They recognize that the time to invest in conferencing and collaboration solutions is now. If we had to sum up the benefits of conferencing and collaboration solutions in one word, we would choose “productivity.” New business communications tools deliver the productivity improvements as both hard and soft benefits (Whittaker, 2015).

**Video Conferencing**

Video conferencing 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. Companies with multiple offices might establish direct video communications between their locations in order to allow their teams to work more collaboratively (Cavus & Danieil, 2021).

Video conferencing can also be used as a medium for conducting training, with the instructor teaching a remote class from almost anywhere. This can be done in a corporate context, especially for getting workers the knowledge they need to better perform their jobs. The academic world can also make use of video conferencing to connect a traditional classroom setting with students who are located a considerable distance from the school (Daft & Lenger, 2016).

A video conference may also be used to conduct regular meetings with company staff or to confer with [shareholders](https://www.investopedia.com/terms/s/shareholder.asp) about the latest activities at the business. It may be used to announce significant changes at a company, such as introducing a new [Chief Executive O](https://www.investopedia.com/terms/c/ceo.asp)fficer, or to present information in an interactive way that allows all participants to engage in discussion about what they see on screen (Maschak, 2018).

## Technologies Used in Video Conferencing

Video conferencing makes it easier to improve business productivity and keep people connected. But before you can do that, below are the essential tools and technology you need to host a successful virtual meeting (Masoodian et al., 2015).

### Software: An organization can work more effectively using video conferencing software that enables online communication for conferences, meetings, and seminars. It offers smart video meeting key features like screen sharing, multiple webcam capabilities, High Definition video, recording, among others (Masoodian *et al.,* 2015).

### Video Input/Output: Video conference participants need a tool that allows face-to-face communication online, making it easy to see what happens and to engage in discussions visually. Video input devices are used to digitize images to the online audience. Some examples are a digital camera a web camera that you attach to a computer when recording a video or streaming from the web. On the other hand, a video output device is any equipment that displays the images from the online conference. It can be a desktop monitor, a laptop screen, a television, a video projector, or an LCD display (Masoodian *et al.,* 2015).

### Audio Input/Output: [Audio input](https://www.infobloom.com/what-are-audio-input-devices.htm) devices allow users to send audio signals to a computer for processing, recording, or carrying out commands. Devices such as microphones let you speak to the computer when recording a voice message or using voice control on a computer. Depending on the conference setup, it could be a built-in microphone on a laptop or a standalone one.

On the other hand, an audio output drives a signal into another device’s audio input. They are found on audio-generating devices such as speakers, an audio system, or a pair of headphones.

For example, you have to connect the TV’s audio output to the speaker’s audio input so the TV can play sound through the speakers (Masoodian *et al.,* 2015).

### Acoustic Echo Cancellation Equipment

[Acoustic echo cancellation](https://uc.yamaha.com/insights/blog/2019/december/what-is-acoustic-echo-cancellation-and-how-does-it/) technology recognizes and eliminates the echo as quickly as possible to achieve the best audio quality. The process is challenging since there are several factors to take into consideration. For instance, the echo cancellation should continue to work even in situations when there’s plenty of background noise or where both sides of the conversation are talking at once (Masoodian *et al.,* 2015).

**Benefits of Videoconferencing in Business**

According to Rudy (2016), electronic meeting tools, and videoconferencing in particular, give people the choice to NOT be there, yet to remain in touch and productive while balancing the work vs. lifestyle equation. In the not-too-distant future, we expect videoconferencing to be the foundation for new ways of reaching customers, creating the ability to connect and sell anywhere, anytime. The advantages of videoconferencing in business includes the following:

**Faster Decision Making and Shorter Time to Market:** The team-oriented structure of modern organizations means that many decisions require insight and approval from many different sources. Electronic meeting tools enable dispersed teams to collaborate easily, solving problems and speeding coordination – ultimately delivering faster time-to-consensus and hence a shorter time-to-market for new products and services. In today’s increasingly competitive world, shorter time-to-market delivers one of the highest payoffs. Another example: presence-based visual collaboration tools enable workers to immediately locate and communicate with coworkers and partners, regardless of their current location, to solve customer issues in real-time and without the wasted cycles of voice mail and email exchanges. The result is decreased worker frustration, faster problem resolutions, and increased customer satisfaction and loyalty (Rudy, 2016).

**Productivity / Efficiency:** Videoconferencing and visual collaboration tools are moving away from the scheduled environment of the departmental conference room to the ad-hoc, unscheduled work style of the desktop. Conferencing on demand delivers immediate productivity boosts and time savings to all knowledge workers by enabling them to integrate visual communications and desktop-based collaboration tools into their normal workflow process. The result is an immediate impact on the bottom line (Rudy, 2016).

**Higher Impact and Focus:** Videoconferencing can help an organization inject higher impact into their meetings and conference calls, especially when compared to an audio-only meeting. Higher impact during meetings translates into shorter, more effective meetings with minimal workflow disruption. Studies have shown that videoconferencing meetings tend to be shorter than in-person meetings, leading to less wasted time (Rudy, 2016).

**Competitive Advantage:** Using videoconferencing can give a company a competitive advantage. For example, a firm that recruits by videoconference rather than flying recruiters or candidates around the country can interview more people, from more locations, in less time, and with less cost and disruption to executive schedules, thereby making better hiring decisions. Using advanced collaboration tools enables companies to better support remote workers and build better dispersed teams, thereby giving more employees more choices on where they want to work (Rudy, 2016).

**Enhanced Quality of Life / Decreased Stress:** Today’s business executive returns from a business trip to be greeted by mountains of e-mail, piles of faxes, and long queues of voice mail. A recent study revealed that more than 70% of business travelers were stressed by business travel. More than half of those people stated that business travel negatively impacts their life, their sleep, and their general welfare. As a viable alternative to business travel, videoconferencing can reduce employee stress and enhance their quality of life. Travel avoidance also allows the employee to steer clear of the security-related delays associated with air travel today (Rudy, 2016).

**Increased Reach:** Some businesses simply require a personal touch between company and client. Videoconferencing allows organizations to expand their global reach without having to overburden their employees with excessive business travel. Typical examples include legal and distance education where subject matter experts use two-way video solutions to interface closely with remote participants and colleagues (Rudy, 2016).

**Improved Management of Dispersed Teams:** Large companies have subject matter experts and qualified resources located around the world. Videoconferencing allows firms to more easily deploy and manage those globally dispersed resources by allowing impromptu, face-to-face meetings between managers, subordinates, and remote peers (Rudy, 2016).

**Business Applications of Video Conferencing**

If video conferencing is to be described in just one word, that word would be ‘versatile. Video conferencing is an amazing way to connect and collaborate. What makes it even more special is the vertical’s ability to adapt to the ever-changing work environments and lifestyle trends.

Today, video conferencing is no more a ‘special occasion’ tool. A luxury you’d use for board room gatherings and important meetings. Video conferencing applications with features like screen sharing, texting, media transfer, etc. are making a stronger case. There is constant innovation going on in the video conferencing vertical. Every other day there is a new app with some new features and offerings. Each new app has the potential to shift the market trend. This sharp competition happens to be the key to constant innovation (Fulk & DeSanctis, 2015).

**Together Stronger: Everyday Stand-up meeting**

With remote working being the new normal, the whole team is seldom present in the same room. Old-style daily meetings are no longer an option. Hosting daily or weekly standup meetings using video conferencing will only foster collaboration, build trust, and strengthen relationships between on-site and off-site teams. Coordinate projects, get task updates, make decisions, and do a lot more, no need to keep track of those messy group email threads (Reinsch & Beswick, 2020).

**Make a Sale:  Sales Presentation**

Your sales team must know that face-to-face meetings fail, more often than not. In face-to-face presentations, a lot of time and resources are invested and a failed deal would mean disappointment and loss. That is why video conferencing for sales presentations is amazing. Your sales team can look prospects in the eye, share screens with them, and deliver dynamic presentations. Besides, sales teams save time and resources that otherwise they would have spent on travel and things (Reinsch & Beswick, 2020).

**Recruiters Rolling: Video Interviews**

Video conferencing allows fast and efficient video interviews. The HR Department can now find great hires and reject unqualified candidates, swiftly and effortlessly. Video conferencing solutions also enable recruiters to expand their search areas without blowing the travel budget (Reinsch & Beswick, 2020).

**Connecting People: Office Portals**

Establishing a connection between employees and headquarters can transform the workflow. Impromptu brainstorms with co-workers, instant reporting, information flow, etc. are easy and fast when you use video to create an always-on office portal. We can simply set up an application for you in a central location, connecting onshore and offshore teams. With this, all “dots” are connected, the central team is in total command (Reinsch & Beswick, 2020).

**See Your People Face to Face**

Face-to-face meetings, direct reports are not possible in this post Covid19 world. Video conferencing solves this problem. It makes it quick and painless to arrange one-on-ones between teams. Whether your folks are around the world or on the same floor, WebRTC solutions can make you connect with them with one click. Our video conferencing one-on-ones have turned out to be transforming for many organizations (Reinsch & Beswick, 2020).

**Design to Rule: Design Reviews in Real-time**

Going back and forth hampers creative processes be it writing or designing. The creative process cannot be done with a time lag. Designers need instant feedback so they can improve while they are working on the design. You can jumpstart your creative process with [video conferencing solutions](https://rtcweb.in/solutions/). Share screen, conduct design reviews of software prototypes, marketing campaigns, and do much more without the hassle of emails and uploads. We can give you a true time-saver, enabling instant feedback for designs (Reinsch & Beswick, 2020).

**Advantages of Videoconferencing in Business**

**Increased savings:** Before the COVID-19 pandemic, many organizations had significant annual budgets for travel to conferences, other businesses and branch offices. While business travel hasn't disappeared forever, pandemic restrictions forced organizations to meet with clients and [hold conferences virtually](https://www.techtarget.com/searchcustomerexperience/news/252482499/Live-conferences-shift-to-virtual-events-yield-surprising-results), which video conferencing software enabled. Most organizations likely saved their entire travel budgets over this time and can continue to travel less and save money in the future. Additionally, platforms like Zoom offer free meetings for a limited number of users or a limited length of time, which could benefit small businesses that lack the budget to travel or invest in other video conferencing products (Masoodian *et al.,* 2015).

**Increased employee productivity:** Video conferencing capabilities enable employees to work remotely -- whether from home, a coffee shop, a library or another location other than the office. This flexibility eliminates various time barriers, such as commute times or travel to and from conference rooms. Employees can join video conference meetings from anywhere. Also, these [meetings become more accessible](https://www.techtarget.com/searchunifiedcommunications/news/252489685/Zoom-addresses-accessibility-for-deaf-and-hard-of-hearing) to employees with disabilities, employees in different states or time zones and potential new hires from different locations. Video conference platforms can also improve communication between employees, as they enable users to discuss issues in real time with chat capabilities, file sharing and video calling. Employees don't have to wait for in-person meetings to discuss issues or ask questions, so they can accomplish tasks and solve problems quickly (Masoodian *et al.,* 2015).

**Meeting transcription services:** Virtual meetings -- like sales product presentations, reviews of current financial performance, contract negotiations or employee reviews -- generally result in action items and next steps. Action items may include generating a quote to send to the client, or an employee making contract adjustments. The takeaways are generally handwritten or digital notes. Yet, with frequent virtual meetings due to employees working from home, employees may struggle to capture this information, especially if meetings have many attendees (Masoodian *et al.,* 2015).

**Translation services for multilingual meetings:** Some business meetings require folks across international borders to meet and interact virtually. In some of these meetings, individuals who speak different languages may interact, which creates challenges when discussions arise. Organizations could hire translators -- which adds cost and complexity -- if existing employees aren't multilingual, or risk misinterpreting parts of the translation. Organizations have various options to support multilingual meetings. Microsoft Teams and Skype offer the ability for anyone communicating over text to receive text translations (Masoodian *et al.,* 2015).

**File and screen-sharing capabilities:** Modern video conferencing software also offers the [ability to share content](https://www.techtarget.com/searchhrsoftware/tip/5-tips-for-managing-a-remote-workforce-in-the-new-normal) and a user's screen with one or more meeting attendees. Screen sharing has become critical, as employees require remote assistance at times from their team members. Another use case is the need to present content, which requires users to display files or data to meeting attendees. Employees could also collaborate and work on shared documents together in real time or through screen sharing (Masoodian *et al.,* 2015).

**One-stop shop and the gateway to other apps:** Organizations may struggle to see the value of having access to apps within a video conferencing platform, but Microsoft Teams offers this access. [Teams offers support to other tools](https://www.techtarget.com/searchcontentmanagement/tip/How-to-achieve-Teams-integration-with-SharePoint-sites) from within the UC platform, so users don't have to leave the app to connect to tools such as a CRM system, Microsoft SharePoint or Microsoft Planner (Masoodian *et al.,* 2015).

**Disadvantages of Video Conferencing in Business**

Despite the many advantages of video conferencing software, these platforms still pose challenges to organizations, especially for content managers and compliance officers.

**Lack of personal interactions:** Video conference meetings can feel impersonal. Even with video enabled, employees are simply communicating with screens. A lack of personal connections and face-to-face contact may cause employees to struggle to get to know their co-workers, managers or clients and develop personal connections with them (Agius & Angelides, 2017).

**Network connectivity issues:** Office settings typically have reliable network connectivity, as well as backup options in case the Wi-Fi network goes down. [Home networks](https://www.techtarget.com/searchnetworking/feature/4-lasting-effects-of-growing-remote-workforces-on-networks) rarely have backup options. These networks also weren't built to support the same activities -- including video conferencing -- as office networks, so they may fail due to bandwidth if, for example, multiple people are on video conferences simultaneously. Home networks may also cause lagging video or audio and dropped calls (Agius & Angelides, 2017).

**Securing meetings:** In 2020, hackers took advantage of the boost in video conferencing usage and increased their attempts to infiltrate and disrupt meetings to create chaos. Zoom, in particular, [faced scrutiny](https://www.nytimes.com/2020/04/03/technology/zoom-harassment-abuse-racism-fbi-warning.html) for several publicized meeting disruptions from internet trolls and caused many IT executives to worry about internal meetings' security. After these incidents, security came more into focus. Many video conferencing apps have safeguards in place that ensure only authorized attendees can join private business meetings, such as the use of passwords to access meetings and waiting rooms, so guests aren't automatically allowed in a meeting without the organizers' approval (Cavus & Danieil, 2021).

**Complying with laws and regulations:** From a compliance perspective, organizations worry that due to the different state laws, [recording some meetings may be illegal](https://www.techtarget.com/searchcontentmanagement/tip/Is-it-legal-to-record-virtual-meetings-and-video-conferences) without all attendees' approval. To address that, Microsoft Teams and Zoom offer audible announcements to confirm the meeting is being recorded. This functionality is configurable. Organizations must also contend with the issue of [storing and archiving recorded content](https://www.techtarget.com/searchcontentmanagement/feature/How-to-navigate-video-conference-recording-privacy) (Rudy, 2016).

**Organizing newly created data:** Newly generated content from recorded meetings introduces new challenges as organizations consolidate and classify information available to users. Some video recordings can be a part of training content, other recordings can be project reviews and others can be team huddles. Regardless of the content type, content managers must plan and define [data governance](https://www.techtarget.com/searchdatamanagement/definition/data-governance) to ensure the information is secure and easily accessible when employees need it (Rudy, 2016).

**Creating policies:** Content managers must plan around new content types and sources. Content managers should create new sets of policies, then apply and implement those policies on the newly created video, audio and text files from the meetings (Rudy, 2016).

**Conclusion**

Video conferencing has become an essential component not only of the business world, but also of the world of education, health, and many other fields. Nowadays, video conferencing is also present in business and it is accepted as a way of doing business. New technologies, such as video conferencing, have given business owners new ways of presenting goods and services, working with customers, and thus they are stimulating the development of strategies that are consistent with new technology. Video conferencing uses synchronous two-way audio and two-way compressed video through the Internet. The paper has also revealed the benefits, advantages and disadvantages of videoconferencing in business operation.

**Recommendations**

Looking at the benefits and applications of video conferencing on the operation of business, the paper puts out the following recommendations:

1. The paper therefore, recommends that business organizations used make use of this technology in order to carryout effective business operations even during pandemics.
2. The paper also recommends that organization should create awareness to their customers on the importance of using the technology.

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