

# COMMUNICATION NETWORK

## Abstract

Communication network platform made digital infrastructure to compete and fulfill social needs. The human beings reacts to the communication network and technology placed on it. It is started by Samuel Morse's telegraph and Emile Baudots teletypewriter. The evolution of network system regarding physical originality and the digital world changed by automated physical world, intelligent machines, common and unlimited Network, faithful infrastructure e. g. There are number of advantages of communication network and technology evolved in current years. In recent days, internet networks connect people and promote conversation, businesses, learning, science, and nations. Whatever the conditions there are some important factors affect the good communication. It is found everywhere and everyone needs to evacuate from the stand where they are in the position.

**Keywords:** telegraph, teletypewriter, digital, automated, *technology and* networks.

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## I. INTRODUCTION

All around the world, the unparalleled incidents of 2020 have brought into focus the important role that digital infrastructure plays in the working of digital work every aspect of current society. Communication technologies are providing new solutions to help social, climatic and economic challenges by effective efficiency, top network usage and plan. It bridge distances and fulfill social needs of resource use, cooperation, competition, identification, secrecy, security and safety. It provides online products and services such as health precaution, education, economy, commerce, governance and farming to help industries.

Communication network platform made digital infrastructure to compete and fulfill social needs. It assures regularity, privacy, reliability and security of public and private which made it believable. It is affordable and qualified for new changes. Modern technologies made humans, machines, things and places automated and related. Complete knowledge is transparent. Traffic network is connected by artificial intelligence machines like automatic vehicles, drones and surveillance equipments which needs top quality network to converse. Cyber system needs sensor information as sensations and smell for support and development.

Principles of Communications networks are clarity, attention, feedback, informality, consistency, timeliness and adequacy. Communication network is universally affordable, intelligible and capable for embedded computer and store. The seven affective types of communication are cleanness, accuracy, shortness, courtesy, concreteness, thinking and completeness.

- 1. Formal communication network:** This is one-way communication formed by management for employees for professional matters, paperwork without any mark. It is made by chart to declare loss, benefit and positivity of communication.
- 2. Informal communication network:** It is a one sided discussion and group system but vast due to its free flow. In all condition you can connect with other enterprise and personal through gossip and chat.

## II. REVIEW OF LITERATURE

Samuel Morse's is a father of modern communication network whose telegraph used Morse code (dots & dashes). Emile Baudot, French engineer, developed multiplexing, teletypewriter (keyboard device pulses used binary numbers) for messages. Further ENIAC and UNIVAC were created for it. Then the telephone developed by Alexander Graham Bell and Thomas Watson in 1876 which expires in 1893 and 1894. Telephone network is quite similar to computer networks use lines and switches along with the Internet. Recent days the modem (1960s) converts digital data into analog tones which is used for communication over modern telephone lines. Wide and local area networks were evolved in 1970s and 1980s. Nowadays, bandwidth innovations, cable modem, Asynchronous Transfer Mode, email, Internet and 4G 5G are the widely used communications network.

In general, the human beings reacts to the communication network and technology placed on it. Researchers proposed several thoughts and opinions on communication network and technology. Many scholars explained very comprehensively the phenomenon.

### III. OBJECTIVES

1. To identify the existence and causes of communication network and its effect among the Scholars.
2. To assess how professional affected by the communication technology.
3. To suggest the coping strategies to address communication network related issues.

**Research question:** Is communication network and technology really useful? Is communication network and technology really affecting professional's performance?

### Hypothesis

- Communication network is not significantly related to Performance of the Professionals.
- Communication network is significantly related to Performance of the Professionals.
- Communication technology is not significantly related to the infrastructure and data.
- Communication technology is significantly related to the infrastructure and data.

### IV. METHODOLOGY

1. **Research design:** Positivistic research approach has been used as samples and is concerned with hypotheses testing, research design and objective method. A Descriptive Research Method used with specific hypotheses was carried out.
2. **Sample size:** The data of communication network and technology is taken for study purpose with users.
3. **Research instrument:** A study of books and websites is a source of the primary data collection. The general information was gathered in the first section. In the second section varied strategies used to measure the impact and its impact on professionals' performance. The statements are related to communication network and technology causing independent factors work overload, role ambiguity, role overload.

In this article, I will try to describe current evolution of the network system. There are important factors for the evolution of network system regarding physical originality and the digital world which involves sensory data.

4. **Collaborative, automated physical world:** Digital world is interconnected and developed including men, machines, action, networking, computation and conversation. It supplies clarity, control and machines to personals, institutes and enterprises which make it efficient. Cyber systems use sensing, actuation and measures to create informative data in physical interactions. Cameras and navigating measurement are used for it. Mix communication and sensing could benefit the whole connected digital twins and digital presentations.
5. **Intelligent machines:** Machines are intelligent and active due to its conceptual and broadening working by sensors, actuators and control. These are robots, voice identifying system and self controlling vehicle which are used for different works. These all are connected automatically in companies. Nowadays, video codec's are used for human self

perception. Communication network captures meaning of expectations, need and ability which needs semantics-driven communication. Perceptive machines researches reasons, provide solutions on difficult, unpredictable things by using conversations and experiences of environment. It needs high-precision positioning distributed measuring abilities and sensing.

6. **Internet** : Internet is useful for the audio-visual, touch sense and other techniques to send varied sense experience which used health checks-ups, solid conversation and digital programming. It reduces time, money and uncertainty. In recent times, sensor techniques, 3D uses touch sensation in the work operations to get the original images and display. Contact lenses, ear buds and brain-computers are used for broad images, clear voice and thought understanding for its suggestions. Communication network helps sense of the internet to measure, setting, sensing and converse by bandwidth and latency.
7. **Ericsson's livorno**: It is an Italian part used for the 5G software of terminal work, machine, robot, varied vehicles, and digital platforms. Vehicles, sensors and cameras automatically records actual data, images, movements, and logistic work. It is very beneficial, safe, secret, long lasting and competitive for the development of ports and good environment.
8. **Common and unlimited network**: Radio and nodes is a common example of this developed network for the humans who covered long area through growing coverage, capacity and audio quality. Drones use 3D quality to capture miles of area. Satellites are the best network for communication. One time LAN and 5G network covers a broad area without any expends. Communication network of 100GHz link is special in it.
9. **Physical network**: Measuring and storing devices are single, unite and evolving for connection and durable positioning. Secure, personal and digital care needs for close and efficient data processing. Network provider and good physical apparatus for the work and implementation focus on it which is a self server. Measures of neuroses, nano, memory, optic and quantum are the special improvement of Moore's law approaches.
10. **Faithful infrastructure**: Automatic and self controlling equipments accepts by nations and companies for personal, secure, safe and confidential work which gives identified, long and acceptable connection .This, network system used in airopplane, transport and websites for network and solutions which trusts the data system. Users and networkers share secure and store data secretly for future measuring and computation. Automatic protection, risk is also included in it.
11. **Reasoning network**: Reasoning networks are reliable, safe, secure, good, clear and durable by making. The digital infrastructure gives lot of facilities to personals, companies and nations to cover long distances and made strong solutions to social, environmental and economic problems. Diet and health care, education, economy, trade, governance and farming benefitted from the use of digital facilities. Communication networks is the backbone of conversation, sends important messages, orders, plans, genius for the regular development of companies and society. It makes an automatic functioning by man less intervention and believable techniques. It is based on climate experience, knowledge to give solutions. It has vast functions, math's, officials to relate control, schedule and forward the conversation.

Management of network is depending upon interaction, automation which is controlled by operators' goal and intent. Its activity and data made according to action. Distributed systems of high quality manage its performance considering plan and education. The network understood by environment inspection, conversations and man's experiences. It assesses the network loss and activity to solve problems. The networks of the radio, algorithms, automation are used for solution acceptance, forwarding, control and active scheduling. This network is available everywhere with confirmed contribution by using nomadic distributed system to help new apps. It is responsible, long-lasting and safe for conversation. In coming period the growth and expansion of best digital facilities will create the automatic, related, knowledgeable machines for the development. These specify to mix the physical and digital world. All advanced techniques will be important to enable trends and enhance the abilities of the digital infrastructure. It provides top contribution needed by application fields such as sense of IT and conversations among machines. It is very affordable mixed in all applications. It will broaden the abilities of the digital facilities by the network place.

### **Advantages of Communication Network**

A communication Network is a collection of methods that users employ to pass on valuable information. The communication network is the sum of all the means which follows the rules. It is a cycle of data made for relationship. There is flexibility in communication and audio to exchange data in varied services as in telephonic conversation. Communications networks have been used to send suggestions and data for monitoring and control through techniques and topologies. Data send by email and messages safely with broad storing on server. It is important for managers in the companies to do a primary work of management and work. Internet Networks connect people and promote conversation, businesses, learning, science, and nations.

There are some other types of communication network as vertical network, chain network, circuit network, wheel network and star network. According to their use communication network are personal area network, local area network, metropolitan area network, campus network, wide area network, content delivery network and virtual private network.

## **V. PROBLEMS OF EFFECTIVE COMMUNICATION**

There are some important factors affect the good communication. It is found everywhere and everyone needs to evacuate from the stand where they are in the position.

- 1. Physical problem:** Sometimes the place these communication technologies are taking place is not as good as they should be for effect. It would be on the higher position for best results but due to varied reasons it is not possible for monitoring managers to do it.
- 2. Emotional and cultural voice:** Most of the time environment is not suitable for the internet facilities. India is nation of diverse and vast cultures, traditions and festivals including lots of noise pollution and vibrations. These things affects very much in the working of the internet technology.

3. **Language:** Effective communication technology can only be useful and beneficial if it is in the common Languages but it is available mostly in the American and British English which makes the common users of other countries very difficult to understand and apply.
4. **No face to face contact:** In some cases there is any eye contact or face to face communication in the working or messaging. This makes a big impact on the face reading, movements and positive attitude understanding of the person. So this should be avoided for the better effect.
5. **Lack of concentration:** Due to the no eye contact persons involving in the communication does not concentrate on the instructions or the situations provided by the opposite speakers and working managers. This may affect a lot in the good work of the listeners and service providers.
6. **No responsibility:** There are lacks of credibility as the working is depends upon the machines and the working person depends upon the work and dynamism of the fast and better work in their job fulfillments. Then the question arises who is responsible for such deficit or loss which make it useless.
7. **Lot of talking:** There is one of the most problematic thing is that both the listeners and speakers are unknown to each other so they are indulged in the lot of conversation which is a wasting of the time and money. It cannot be controlled by the machines because in such cases it has no working to do because of given instructions. So this is the big loss of the communication network.

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