



## Modern Wireless Communication

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**INTRODUCTION:** Communication is defined as the interaction and interchange of information between two individuals whether human or non-human since the beginning of mankind humans have been curious about communication. And years of evolution has led to sophisticated use of signs, symbols and voice modulations as better medium of communication. With increasing desire for communication devices play an important role in our daily lives. Telecommunication is the transfer of information between two sources at a considerable distance and this transfer of information uses electromagnetic and electrical field. Telecommunication is not new to humans as early form included smoked signals, drums and homing pigeons ,however the technological advancement took place in the late 18th and 19th century with the invention of electric telegraph in which the discovery of electricity played an important role. Initially message could be conveyed in the form of electrical signals to shorter distances but with further research first operating telegraph was invented in the year 1816 by Francis Ronalds. The invention of telephone and radio in the later half of the century has laid the foundation for the necessity of wireless communication devices. Prominent inventors like Nicholas tesla, G Marconi and Thomas Alva Edison contributed to the invention of radio. Invisible high frequency and low wavelength radio waves could be harnessed for human convenience with minimum usage of wire and cords which led to the concept of wireless transmission. Unlike telephone which needed lengthy wires and cables it was considered easy to transmit radio signals at a certain frequency. However the true development in wireless devices is the semiconductors era in which transistor technology and integrated microprocessor

played a strategic role. Adding to all the scientific achievements the actual wireless revolution began in 1990s and with the introduction of digital wireless networks a sharp shift was observed from wired to wireless technology. This wireless technology penetrated commercially into cell phone, pagers and computer networks industry giving a boost to the usage of wireless devices for communication making the communication more intimate. The technological advance in radio frequency and microwave engineering has increased voice traffic and successful delivery of digital data like multimedia, text messages and images. Present day best application of wireless technology is the cell phone. The cell phones use radio waves from signal transmission cell phone towers. Ironically, a device developed to increase communication has changed how members of the modern family react with each other. With excess use of cell phones families are spending less time with each other physically. Human emotion has taken a digitized form and the interaction has become digital. Studies have shown that excess use of cell phones and smartphones causes disorders like amnesia and insomnia which adversely impacts mental health of the humans. The next generation smartphones would be aware about the context available and the use of elements like Artificial Intelligence (AI) would be able to take advantage of the sensors and applications in determining the likes and dislike of human beings. The technology developed could be able to keep track of the personal data of the viewers. A technological device like Omni touch enables the user to view apps and use them on hand, arm and everyday desk. Network based Wi-Fi and Wireless LAN is being developed by China which would give a sense of technology.

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### CONFLICT OF INTEREST

The author states there is no conflict of interest.