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ABSTRACT

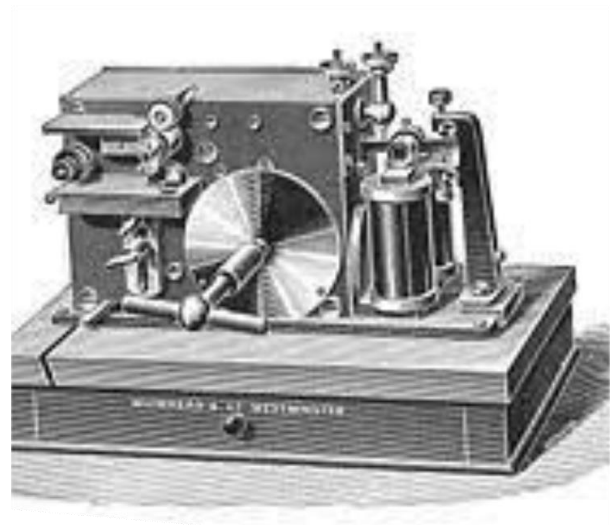
In 1895 the Russian physicist Aleksandr S. Popov invented a device for detecting electrical disturbances in the atmosphere. More than just a lightning detector, Popov's invention proved the feasibility of radio transmission. He demonstrated it in St. Petersburg on 7 May 1895. Meanwhile, in Italy, Guglielmo Marconi was developing his radio apparatus. In most of the world, Marconi became known as radio's inventor. But not in Russia. Fifty years after Popov's demonstration, the Soviet Union declared 7 May as Radio Day. It's still celebrated in Russia to this day.

CHAPTER 1

INTRODUCTION

1.1. Definition of Robots and Robotics

Radio is the technology of signaling and communicating using radio waves. Radio waves are electromagnetic waves of frequency between 30 hertz and 300 gigahertz. Guglielmo Marconi , an Italian inventor, proved the feasibility of radio communication. He sent and received his first radio signal in Italy in 1895. By 1899 he flashed the first wireless signal across the English Channel and two years later received the letter "S", telegraphed from England to Newfoundland. This was the first successful transatlantic radiotelegraph message in 1902. By 1899 he flashed the first wireless signal across the English Channel and two years later received the letter "S", telegraphed from England to Newfoundland. This was the first successful transatlantic radiotelegraph message in 1902.



1.1.1 First Radio Invented

CHAPTER 2

BACKGROUND DETAIL

2.1. History

If success has many fathers, then radio is one of the world's greatest successes. Perhaps one simple way to sort out this multiple parentage is to place those who have been given credit for "fathering" radio into groups. The history of radio can be traced through the lives of these people:

- 1) Maxwell
- 2) Hertz
- 3) Heavyside
- 4) **Marconi**
- 5) DeForest
- 6) Armstrong
- 7) Farnsworth
- 8) Sarnoff



2.2.1 Guglielmo Marconi's Photo

2.2. THE 1800S: EARLIEST BROADCASTING

- Bell transmitted sounds by telegraph in 1877.
- Hertz invented the "spark-gap detector" which verified the existence of electromagnetic waves.
- In 1895, a young Italian named Guglielmo Marconi invented what he called "the wireless telegraph" while experimenting in his parents' attic. He used radio waves to transmit Morse code and the instrument he used became known as the radio.
- De Forest invented the vacuum tube allowing for sound, voice, and music transmission.

CHAPTER 3

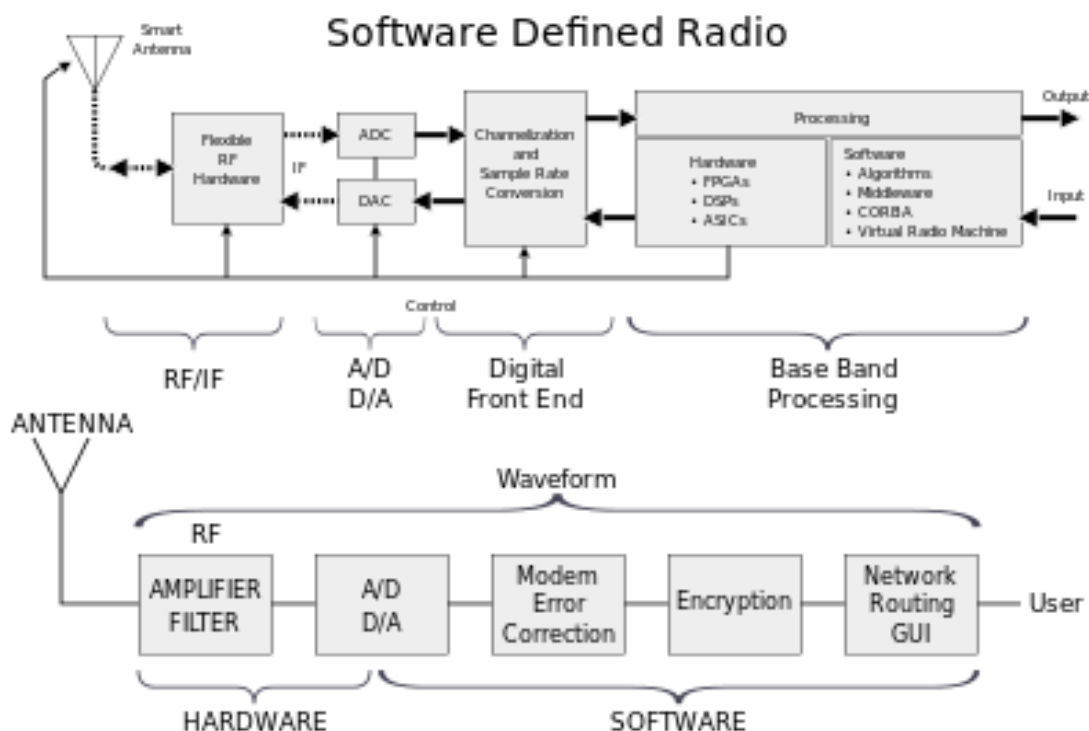
ARCHITECTURE AND WORKING PRINCIPAL

3.1. How It Works?

Radio works by transmitting and receiving electromagnetic waves. The radio signal is an electronic current moving back and forth very quickly. A transmitter radiates this field outward via an antenna; a receiver then picks up the field and translates it to the sounds heard through the radio.

In AM (Amplitude Modulation) radio, the strength (amplitude) of the signal is changed (modulated) to make the sounds. In FM (Frequency Modulation) radio, it is the speed (frequency) of the signal that is changed. When you tune in your radio, the dial number indicates the kilo or megaHertz at which the signal is being broadcast.

Radio signal uses specific frequency, or how quickly the waves of the field move up and down.



3.1.1. Software Defined Radio

Frequency terms & their abbreviations			
Term	Cycle per second	Abbreviation	Equivalent
1 hertz	1	1 Hz	
1 kilohertz	1,000	1 kHz	1,000 Hz
1 megahertz	1,000,000	1 MHz	1,000 kHz
1 giga hertz	1,000,000,000	1 GHz	1,000 MHz

3.2.1. Frequency terms and their abbreviations

CHAPTER 4

APPLICATIONS OF INNOVATION

4.1. Different Robot Applications

Radio owes its development to two other inventions: the telegraph and the telephone. All three technologies are closely related, and radio technology actually began as "wireless telegraphy".

The radio today is much different from the ancient times. Nowadays, there is an integrated circuit technology, small radio receivers that they exist in every phone or device and also a huge amount of entertainment and news every single day.



4.1.1. Mobile , Headphone & Smart Watches

CHAPTER 5

FUTURE ENHANCEMENT

There are so many opportunities that will allow radio to move forward in full force. The future of radio is brighter than most believe. If you are in the industry, pay attention to the changes in mobile usage and keep tabs on how your audience is listening, and then find the way that radio fits in.

We are currently seeing an increase in connectivity in American lives. From smart speakers, and smarter cars, to mobile phones, our audiences are craving convenience and connection. How do we accommodate that? By connecting with our audiences where they are and how they are.

We see apps as an opportunity to enhance our ability to brand ourselves and enhance the growth of our local partners. The ability to have an app that is local, responsive, and accessible is the future of marketing. We are excited to see how it plays out.

The Digital Future

- 1) Radio
- 2) Digital Broadcasts
- 3) Internet Streaming

CONCLUSION

The radio communications has been used over a hundred years now. The uses of radio communication increasing day by day & its being used by a wide range of electronic sector. This technology is upgrading to give us better satisfaction.

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