The Different Types of Wireless Communication

Did you know that there are almost 5000 satellites orbiting the earth right now? We have become used to instant communications and entertainment wherever we may live on the planet. However, it takes complex technology to maintain remote wireless communication and control of these satellites.

In truth, wireless communication technology has an unseen impact on all of our lives each day. If you have a business, you may wonder how you can make the best use of the various types of wireless communication. What else can it do for you?

Learn the answer by reading our in-depth guide to wireless technologies.

1. Satellite Communication

Satellite communication is a crucial form of wireless communication. By means of satellites, people all over the earth can communicate with each other.

It may not be possible to send a signal to another country because, well, the curvature of the earth is in the way. This is one reason why satellites are orbiting the earth because they can send a signal amongst themselves and eventually to the distant country. All of this at an incredibly fast speed.

NASA and other space agencies make regular use of this type of technology. Of course, sending a satellite into the atmosphere is not cheap. Therefore the technology involved must be subjected to significant testing before launch.

2. Infrared Communication

Infrared communication is present in most homes in the form of a television remote control. However, how does it work?

IR transmits information by means of invisible light. This means that on the electromagnetic spectrum it lies between microwaves and visible light.

Infrared communication requires a transmitter and a photoreceiver to receive the light beam. Since any disruption to the light will result in the photoreceiver not receiving it, IR will only function when there is a line of sight visibility. That means that if you stand between the transmitter and receiver it will probably not work.

3. Broadcast Radio

The most famous form of wireless transmission on our list, broadcast radio, was probably the first kind of wireless communication.

Radio transmitters send out data in the form of radio waves to receiving antennae. Radio waves are forms of electromagnetic signals. Signals are relatively narrow, and waves can be sent across various frequencies. This is why your car radio is able to receive signals from many different radio stations.

There are many types of users of radio communication. Radio stations that send out informative and entertaining programs. Maritime radio channels allow ships to communicate with each other and the shore. Ham radio enthusiasts are able to communicate and use radio communication for personal use.

4. Microwave Communication

Microwave technology is an effective type of communication that is used globally. This technology can be broken down into 2 types

Satellite Microwave Communication

This is the most effective method of transmitting microwaves globally. Like Infrared technologies, Microwave technologies require a clear line of sight. This means that if you want to send a signal over a long distance, sending it up to a satellite first is a good idea.

The only problem is that in very dense cloudy weather the signal to the satellite can be blocked by atmospherics.

Terrestrial Microwave Communication

Microwave technologies can be a very secure form of communication. If a signal needs to be transmitted over a short distance, it can be enough to erect two antennae with a clear line of sight. The signal can then be

transmitted between the two receivers. This negates the need to connect to an outside network.

5. Wi-Fi

Wi-Fi internet is a low powered wireless electronic network. These are available in almost every shopping mall and cafe in the world. Essentially a physical wired network is connected to a router. This creates a highly localized and low power wireless network.

From this, it is possible to connect a range of devices to the local network. However, public wireless internet access is known to be a target for thieves and hackers. Therefore, it is essential that both users who connect to these networks and the providers use password protection defense methods.

6. Mobile Communication Systems

The burgeoning mobile phone industry uses similar technology to Wi-Fi but on a much grander and safer scale. Mobile phone companies provide coverage to customers nationwide or even international scale.

They do this by means of a complex blend of local networks and transmitters together with satellite support.

7. Bluetooth Technology

Bluetooth is a relatively new technology but is becoming more and more prevalent. It is essentially a simple method to send information across a short distance. However, this information can include either messages or even files.

Bluetooth technology was originally designed to be a replacement for physical cables. However, it does have its downsides. It has a maximum reach of 30 feet. This can be reduced further, but not entirely blocked by walls and other solid items.

All Types of Wireless Communication and Much More

There are so many types of wireless communication available today. With different technologies and aerial designs to support them, it pays to do thorough research and learn what wireless communication technologies will work best or you.

If you are looking to employ wireless communication technologies for your business or home, then we are here to help. We leverage our years of experience to provide sound guidance and products to our customers. Why not follow our blog or contact us to find out how we can help you today.

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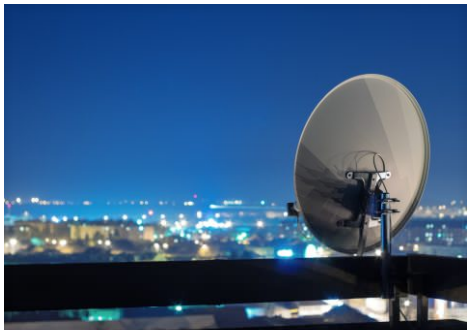

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