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LAN, WAN, MAN, HAN and PAN.

Among the different Area networks that are used for devices to communicate between themselves, there are five principal networks, which are Local Area Network, Wide Area Network, Metropolitan Area Network, Home Area Network, and Personal Area Network. Most of these networks allow users to access the files and transfer files within the network and through the internet. There are some similarities and differences between them. One of the main differences is the area that each can cover, for example, the smallest area covered area is the LAN, while the metropolitan area networks can cover an area larger, and then the wide-area network accounts for the largest. Thus, a lot of differences can be found between these kinds of networks that were mentioned.

Firstly, A Local area network is a computer network that extends to a small area. Local area networks are usually limited to a room, building, or even a group of buildings. However, the Local area network can be connected to other local area networks at any distance through telephone lines and radio waves. Each computer inside the network can access data and equipment anywhere. Thus, the Local area network system is connected to a Wide-area network, which are the ones becoming Internet Service Providers. Also, users are able to use this kind of network to communicate with each other through sharing files between the devices connected. Another advantage is the fact that it can transmit data at a very high rate, but the distance is limited, and the number of computers that can be connected to a single network is also limited.

Secondly, a Wide area network is a network that is present in larger geographic areas than other network types, such as a local area network which were explained before. The Wide area network connects different smaller networks, such as Local area networks and Metropolitan area networks, so that the communication between the computers and users in one location can be sent and received to other locations. In many ways, a Wide area network works in a similar way to a LAN network, but just on a bigger scale. Typically, the protocols used for the Wide area networks use devices such as routers, switches, firewalls, and modems.

Thirdly, compared with Wide area networks, the Metropolitan area networks has a larger range of area. This kind of network all the devices located in the same or different cities. Meaning that it can cover a large range of areas and can be used as an Internet Service Provider. Thus, the mechanism of the Metropolitan area network is similar to an Internet service provider (ISP), but with the difference that this kind of network doesn’t belong to a single organization. Compared to WAN, MAN provides its users with shared network connections, it mostly works on the data link layer, which is the second layer of the OSI model.

Fourthly, a Home area network is the kind of network that operates in small boundaries where it can communicate and share information between computers, mobile devices, and other devices through network connections such as the Internet. It also provides an Internet connection that is shared among multiple users through wired or wireless modems. Thus, users can also be host devices, using standard computers, laptops, mobile phones and tablet computers.

Lastly, a personal area network or PAN is a computer network that provides communication between computer devices within low ranges distance. It can be wired, such as USB, such as infrared, Bluetooth, and ultra-wideband. Thus, the limit of a Personal area network is usually just a few meters, for example, they include devices like, mobile headsets, wireless keyboards, wireless mice, printers, barcode scanners, and game consoles.