NETWORKS

Today, networks are everywhere and everyone wants to be connected. Networks can be classified according to the size and geographic scope (PAN, LAN, MAN, WAN). PAN (personal area network) – it connects some electronic devices of the user. LAN (local area network) – it connects devices within a limited area such as a school, laboratory, and office building. CAN (campus area network) – it connects 2 and more LANs or some buildings. MAN (metropolitan area network) – it spans over some cities. Usually it is very fast because of using optical fiber technology. WAN (wide area network). The Internet is an example of WAN. You can think of a network as a spider web with many interconnecting points, are referred to as node. A network node usually contains a computer, networked peripheral, or network device. To connect to a LAN, a computer requires network circuitry. It is built into the main system board of most pc.

A network peripheral is any device that contains network circuitry to directly connect to a network. There are some examples: printers, scanners, and storage devices.

Device may be connected to a network by different ways. So, there are some network topologies. They can be wireless and wired.

Star topology is a computer network topology (CNT) in which all nodes are connected to a centralized hub. This type is not very expensive, has centralized control and it is easy to troubleshoot. Moreover, if a node fuels, it will not affect other nodes.

Mesh topology is a CNT in which nodes (узлы) are interconnected with each other. This type is very fast, but it is very hard to maintain.

Hybrid topology is the most widely used CNT. It is combination of 2 or more topologies. It is flexible and reliable, but expensive to implement and required Multi-station Access Unit.

Infrastructure topology is a combination of wired and wireless device. There is wireless access point.

Ad hoc is very simple wireless topology.

So, it is very important to maintain your network. There are some advices: you can use different types of encryptions to hide your data, you could use firewall (брэндмаузер), it is a software or hardware, designed to filter out packets, that enter your computer.