Unit 3 – networks



networklinks things together

communication networklinks devices so that data and information can be shared among them

PANPersonal Area Network - connects smart devices or consumer electronics within a range of about 30 feet

LANLocal Area Network - data communication networks that connect personal computers within a very limited geographical area

WANWide Area Network - covers a large geographical area and usually consist of several smaller networks that connect different computers on a variety of platforms.

communication channelthe medium used to transport information from one network device to another

wired channelstransport data through wires and cables

wireless channelstransport data from one device to another without the use of cables or wires

RF signalsRadio waves - typically used for bluetooth devices

microwavesanother option for transporting data wirelessly, but can be aimed in a single direction

bandwidthis the transmission capacity of a communication channel

Unit 3 - networks - Paper Example

topologyrefers to the structure and layout of network components such as computers, connecting cables, and wireless signal paths Example: Point to Point, Star, Mesh, and Bus

nodeany device on a network

DTEData Terminal Equipment - any device on a network

routera device that controls the flow of data within a network

modemcontains circuitry that converts the data-carrying signals from a digital device to signals that can travel over other communication channels

communication protocola set of rules for efficiently transmitting data from one network node to another

handshaking2 devices on a network negotiating their communication protocols

protocol stacknetworks that use more one set protocols

ARPANETcreated in 1969, connected computers at UCLA, the Stanford Research Institute, the University of Utah and the University of California at Santa Barbara

internet governancea set of shared protocols, procedures, and technologies that evolve through common agreement among network providers

ICANNthe organization that supervises Internet addressing

Internet infrastructure the way networks fit together

Tier 1 NetworksSuch as At&t, CenturyLink, and Verizon who own and maintain millions of dollars data communication equipment

Tier 2 NetworksSuch as Comcast and Merit, pay a fee to connect to Tier 1 networks

Tier 3 NetworksSuch as Midwest Cellular, Business Networks, Home Networks, and Education Institutions - end user who pays fees for connection services

packetis a parcel of data that is sent across a computer network

circuit switchingestablishes a dedicated private link between one telephone and another for the duration of the call

packet switchingdivides a message into several packets that can be routed independently to their destination.

IPv4Internet Protocol version 4 - uses 32 bit addresses

IPv6Internet Protocol version 6 - uses 128 bits for each addresses

IP Addressis an identifiable name for a specific computer on a network often pronounced TCPIP

static IP AddressDevices who have a permanently assigned IP address

dynamic IP addressesare temporarily assigned IP address, for when the device is turned " on".

domain nameeasy to remember name for the IP address like nike. com

domain name system he mechanism for tracking domain names

domain name serversservers that are scattered around the world that maintain lists of all domain names

connection speedthe amount of data that can be transmitted in a specified time

latencyis the elapsed time for data to make a round-trip from point A to point B

pingis a utility software designed to measure responsiveness

ping rateindicates how quickly data can reach a server and bounce back to you.

ethernetis a wired network technology deployed in 1976

Wi-Fia set of wireless networking technologies (designs consist of a mesh design or star configuration)

wireless encryptionscrambles the data transmitted between wireless devices and then unscrambles the data on devices that have the encryption key

Guest networkessentially a second network that you can configure on your LAN's router

file sharingallows files to be accessed from computer other than the one on which they are stored network discoveryis a setting that affects whether your computer can see other devices

permissionsspecify how shared files can be used

FTPfile transfer protocol

BitTorrentis a file sharing protocol that distributes the role of a file serve

across a collection of dispersed computers

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