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CST 1100 Assignment #1

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The 802 Committee

The 802 Committee is an organization that develops and maintains networking standards and practices for local and metropolitan area networks. There are more than twenty five working and retired groups involved with maintaining and improving specific standards that make up the IEEE 802 Local area network/ Metropolitan area network (LAN/MAN)Standards Committee with the most widely used standards being used for the Ethernet family, Token Ring, Wireless LAN, Bridging and Virtual Bridged LANs.

The 802.1 group is in charge of Bridging and Network management standards. Bridging is defined as networking equipment used to connect two or more devices to each other to allow them to communicate. An example of this an internet router connecting someones computer to the internet, this group would be in charge of the standards that are used to keep these things linked together. There are four types of network bridging technologies : simple bridging, multi-port bridging, learning or transparent bridging, and source route bridging.

The 802.2 group is in charge of the standards associated with Logical Link Control (LLC). LLC is a sublayer in the Data link protocol, with the other layer being Media Access Control (MAC). LLC is responsible for the data transmission between computers and devices on a network.The purpose of the LLC is to manage and ensure the integrity of the data transmissions. LLC is also responsible for the facilitation of connection control and flow control.

The majority of LANs that are used today are based on some sort of Ethernet technology. The original version was just an experiment 3 Mbps system running on coaxial cable in 1973. Ethernet is a group of computer networking technologies for LANs and MACs first introduced on the market in the 1980s. It has become the main wired LAN technology, replacing past devices such as Token Ring, FDDI and ARCHNET. So much so that the only other real alternative is wireless LAN better known as Wi-Fi. Current Ethernet tech boast speeds of any where ranging from 10Mbps to 100 Gbps, with predictions we might even be able to reach 400 Gbps really soon. Fiber optic cables and technology are a big reason this leap in data transfer speeds can be made possible.

The 802.4 and 802.5 networks are also known as the Token Bus , and Token Ring networks. These networks usually made up a group of work stations put together with a coaxial cable. Each station must have a token before it can broadcast to the network, with the token usually being passed around in a ring from station to station at data transfer speeds of 4 to 10 Mbits. The committee has defined the token ring network as a broadband network meaning its able to connect to multiple networks. Token Bus and Token Ring have been retired and are no longer in use due to lack of interest and newer cheaper technology.

The fifth network is the Wireless Network ,better known as Wi-Fi, which are created and maintained by the 802.11 group. This network allows wireless local area network (LAN) computer communication on frequency bands ranging 2.4GHz to 60GHz. Wi-fi has become the only other real alternative to wired LANs because of its simple installation and use and because newer versions are continuously being released each revision has become its own standard.