National University of Computer and Emerging Sciences



Assignment 07

COAL

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**External Interconnection Standards**

Following are some external interference standards:

# USB:

## Universal Serial Bus

It is used for peripherals connections. It is used for slower speed devices .Like keyboard ,pointing devices. But it is also used for Fast Speed Interference devices like printers, disk drive.

USB have many generations:

* USB 1.0 LSDR=1.5Mbps FSDR=12Mbps
* USB 2.0 Data Rate=480Mbps
* USB 3.0 High Speed Bus called SuperSpeed. Its

Transfer rate is 10Gbps.

USB is Controlled by Root Host Controller, attaches with device to create Local Networks.

# Fire Wire Serial Bus:

FWSB is alternative to small system computer to use in smaller system e: g personal computers, workstations FireWire uses a daisy- Chain configuration, with up to 63 devices connected off a single port. Moreover, up to 1022 FireWire buses can be interconnected using bridges, enabling a system to support as many peripherals as required. It provides to know as hot plugging. Which make it possible to connect or disconnect peripherals without any power to system. It also provides facility to set Device ID automatically.

Data rates is from 25 Mbps to 3.2 Gbps.

# Thunderbolt:

This is one of the fastest connection technologies, developed by with the help of Apple. This combines videos, audio, and data in single high-speed connection for peripherals such as Hard Drives, Network Interfaces, Video Capture Boxes. It Provide 10Gbps and 10 watts to power.

# InfiniBand:

InfiniBand is an I/O specification aimed at the high - end server market. The first version of the specification was released in early 2001 and has attracted numerous vendors. For example, IBM enterprise series of mainframes has relied heavily on InfiniBand for several years. InfiniBand has become a popular interface for storage area networking and other large storage configurations. In essence, InfiniBand enables servers, remote storage, and other network devices to be attached in a central fabric of switches and links.

# PCI Express:

Peripheral Component Interconnection Express is abbreviation of PCI Express. It is High Speed Bus System for Connecting Peripherals of Much Variety of Types and Speed.

# SATA:

Serial Advanced Technology Attachment is abbreviation of SATA. It is inference of disk storage system. It provides data rates up to 6 Gbps with a maximum per device 300Mbps.It is widely used in desktop computers.

# Ethernet:

Ethernet is the predominant wired networking technology, used in homes, offices, data centers, enterprises, and wide- area networks. It Support 100Gbps. Ethernet began as an experimental bus based 3 Mbps system.

* 10 Mbps
* 100 Mbps
* 1 Gbps
* 10 Gbps
* 40 Gbps and 100 Gbps

# WIFI:

WIFI is wireless Internet Access Technology, used in homes, offices and public Spaces .It is in Home to connect computers, tablets, smart phone and host of electronic devices like video camera , TV.

It enhances workers productivity and network effectiveness. WIFI Hotspot expand to provide free internet access in most public places.

Some data rate Versions are following:

802.11: -------: 2Mbps

802.11a: -------: 54Mbps

802.11b: -------: 11Mbps

802.11n: -------: 600Mbps

802.11g: -------: 54Mbps

802.11ad: -------: 6.76Gbps

802.11ac: -------: 3.2Gbps