

Direction

Simplex: Data transmission in one direction only

Half duplex: Data transmission is in both directions but not at the same time

Full-duplex: Data transmission in both directions simultaneously

Method

Serial: data is sent one bit at a time over a single wire or channel.

eg. sending data from a computer to a modem for transmission over a telephone line.

Parallel: Several bits of data (usually 7 byte) are sent down several wires or channels at the same time.

eg. sending data from computer to printer using a ribbon connector

Synchronisation

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Asynchronous : data being transmitted in an agreed bit pattern. Data bits are grouped together and sent with control bits which represent the start and end of data.

Synchronous : there is a continuous stream of data. The data is accompanied by timing signals generated by an internal clock.

This ensures that the sender and receiver are synchronised with each other.

Error checking methods

Parity checking : Uses the parity bit and the type of parity (even or odd) to identify if the data is correct or not. during transmission

Parity blocks — no. of 7 bits are totalled vertically and horizontally to find exact place of error.

ARQ — Automatic repeat request makes use of acknowledgement and timeout to check data.

Checksum — Data is sent in blocks and an additional value, the checksum, is also sent at the end of the block of data.

Echo check — The data is sent back to sender who checks both sets of data.

Internet

ISP — Internet service providers are companies that provide the user with access to the internet. A monthly fee is usually charged.

ISP will set up a user account which will contain a username and password which are needed to get access to the internet.

IP and MAC address - The IP address gives the location of a device on the internet, whereas the MAC address identifies the device connected to the internet.

HTML

Structure - includes the semantics and structural mark up of the document.

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Presentation - style of the document, how it will look.

CSS - Cascading style sheet file will contain everything to control the actual presentation of the web page.

HTTP - Hyper text transfer protocol is a set of rules that must be obeyed when

transferring files across the internet.

web browser - it is a software that allows a user to display a web page on their computer screen.