

Topics : Chaper 11

Input Output Interface

<https://www.youtube.com/watch?v=b9frb09L2kU>

Asynchronous Data Transfer

<https://www.youtube.com/watch?v=P6Q5QZAZ8yc>

Priority Interrrupt

<https://www.youtube.com/watch?v=Y3rT6tkM8kc>

DMA Transfer

<https://www.youtube.com/watch?v=ltvpkuQRZao>

CISC :- A computer with a large no. of inst. is classified as Complex Inst. set Computer

RISC :- Reduced Inst. set Computer.

CISC :- Inst. set need to consider

- ① Machine language constructs
- ② Requirements imposed on the use of high level languages

Highlevel \rightarrow Compilers
 \downarrow
 Machine Language

If we have complex inst. set then it simplify the compilation and improve the overall performance.

CISC also introduce variable length instruction formats.

5 properties from book

Peripheral :- Input/output devices attached to the computer.

[Students have to cover basics]

11-2 - I/O Interface

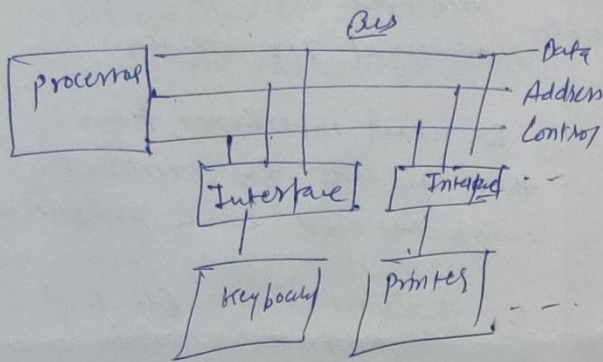
provides a method for transferring information b/w internal storage and external I/O devices.

We need interfaces, ~~as~~ there are diff b/w central computer and each peripheral.

1. Peripheral are Electro-magnetic and CPU are electronic
2. Data transfer rates are diff.
3. Data codes and formats in peripherals differ from the word format in CPU and memory.
4. The operating mode of peripherals are diff from each other and each must be controlled so as not to disturb the operation of other peripheral connected to CPU.

To resolve all these diff., computer system include special hardware components b/w CPU and peripherals to supervise and synchronize all

input and output transfers. These components are called interfaces because they interface b/w the processor bus and the peripheral device.



Interface decode the address and control received from I/O bus, interprets them for peripheral and provides signals for peripherals.



It also synchronizes the data flow and supervises the data flow b/w peripheral and processor.

2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.12, 2.13, 2.14, 2.19, 2.20, 2.21

To communicate to a particular device, the processor places a device address on the address line.

And each interface decoded the address line. When interface detect its own address, it activate the path b/w bus line and the device that it controls.

At the same time processor provides a four code in the control lines. Interface decode it and execute it.

These commands are called I/O commands and are of four types - Control, Status, Data Output, Data Input.

Control :- to activate the peripheral and to inform what to do.

Status :- check status of peripheral

Data output :- transfer data from bus into one of its registers.

Data Input :-

I/O vs Memory Bus

