**INPUT-OUTPUT ORGANIZATION**

**The Input-Output Subsystem of the computer provides an efficient mode of communication between the central system and the outside environment. It handles all the input-output operations of the computer system.**

**Peripheral Devices:**

**Input or output devices attached to the computer are also called peripherals. The Input / output organization of computer depends upon the size of computer and the peripherals connected to it.** **These devices are designed to read information into or out of the memory unit upon command from the CPU and are considered to be the part of computer system.**

**There are three types of peripherals:**

**Input peripherals: Allows user input, from the outside world to the computer. Example: Keyboard, Mouse etc.**

**Output peripherals: Allows information output, from the computer to the outside world. Example: Printer, Monitor etc.**

**Input-Output peripherals: Allows both input (from outside world to computer) as well as, output (from computer to the outside world).**

**Input - Output Interface**

**Input Output Interface provides a method for transferring information between internal**

**storage and external I/O devices.**

**Peripherals connected to a computer need special communication links for interfacing them**

**with the central processing unit.**

**The purpose of communication link is to resolve the differences that exist between the**

**central computer and each peripheral.**

**The Major Differences are:-**

**1. Peripherals are electromechnical and electromagnetic devices and CPU and memory are electronic devices. Therefore, a conversion of signal values may be needed.**



**2. The data transfer rate of peripherals is usually slower than the transfer rate of CPU and consequently, a synchronization mechanism may be needed.**



**3. Data codes and formats in the peripherals differ from the word format in the CPU and**

**memory.**

**4. The operating modes of peripherals are different from each other and must be controlled so as not to disturb the operation of other peripherals connected to the CPU.**



**To resolve these differences, computer systems include special hardware components between the CPU and Peripherals to supervise and synchronize all input and output transfers.**

**These components are called Interface Units because they interface between the processor bus and the peripheral devices.**