Special Purpose Input/Output Devices

Braille Keyboard

This Braille keyboard is designed to aid the visually impaired persons. Some Braille keyboards are the same design as normal keyboards but the keys have the Braille dots to help the user identify the keys. Other Braille keyboards have 8 major keys with which the user can type out the letters in Braille the same way as s/he reads them.

Special Purpose Keyboards

These are keyboards which have pressure sensitive pads (with modifiable letters/pictures) instead of keys and are aimed at users with limited eye-hand coordination.

Eye sensor readers

For people with mobility impairment, an eye sensor reader is used to operate a computer software. This device is mounted directly in front of the person's eye. An infrared beam is directed onto the eyeball iris and it reads the coordinates of the point on the screen where the person is focusing on. Therefore, the computer moves the pointer to these new coordinates.

Braille Printer

A Braille printer is aimed at the visually impaired people. Instead of displaying characters on paper, Braille printers emboss the paper with an array of dots to form Braille characters. The printed Braille characters can then be felt by the user's fingertip.

Speech Recognition

This is another input device which is ideal for people with different disabilities. The user speaks commands or text into a microphone and speech recognition software recognises the spoken words. However, the differences between the same words spoken by different people still make this an unreliable process and the software has to be 'trained' to work with different users.

Speech Synthesis

This is an output device ideal for people with visual impairment. Speech synthesis is like a talking computer, that is, the computer reads out to the user the name of buttons, icons or text on the screen.