AT Guide to Alternative Access

There are various access methods that can be used to control a computer, when a mouse or keyboard are difficult for an individual to use.

Headmouse

A head mouse consists of a camera placed on top of the monitor which tracks the position of a user's head. A reflective dot is sometimes placed on the user's forehead or glasses. When the user moves his/her head, the movement is recognized by the camera which in turn translates these head movements into mouse or cursor movements on screen. Mouse selections are made by using a dwell facility whereby the user pauses at an on-screen target. Alternatively the user may use an external switch to make a selection on screen.

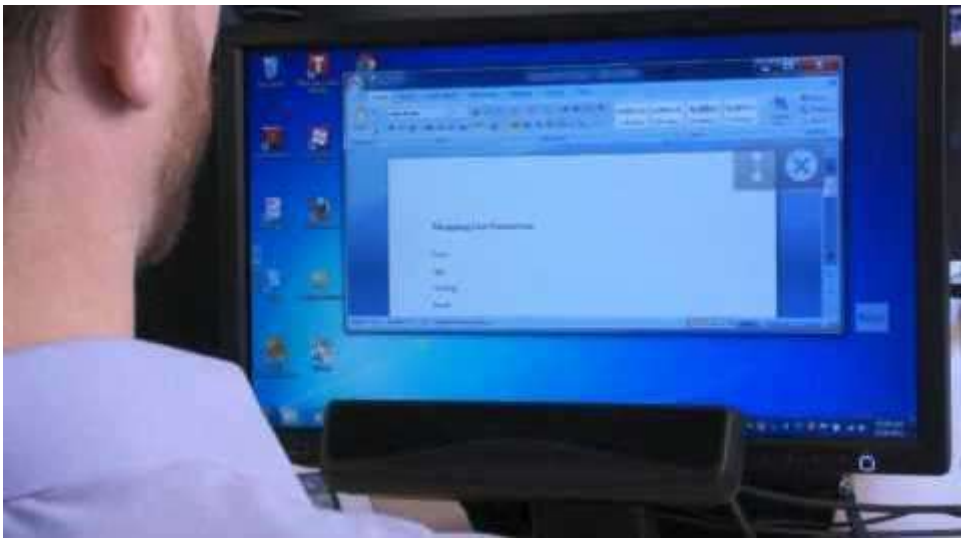
Typical headmouse systems include:
HeadMouse® Extreme http://www.orin.com/access/headmouse/
SmartNav 4 http://www.naturalpoint.com/smartnav/

Touchscreen

Touch screens allow the user to move the cursor on screen, by using their finger directly on the screen. A tap on the screen activates the mouse click function.

Eyegaze

Eyegaze systems allow the user to control the mouse onscreen by using their eyes. Sensors on the devices locate the pupil of the eye and use its movements to move the cursor on the screen.



Tobii PCEye eyegaze system
http://www.youtube.com/watch?v=euBDysPgRPQ

Voice Recognition Software

Voice recognition software packages are becoming more and more user-friendly and are now more commonly used in office environments, as well as by people who want an alternative method of inputting text, etc to the computer. Using a microphone, the user speaks in text, or commands the computer to carry out functions which would previously have been undertaken with the mouse. These might include: file management, printing,

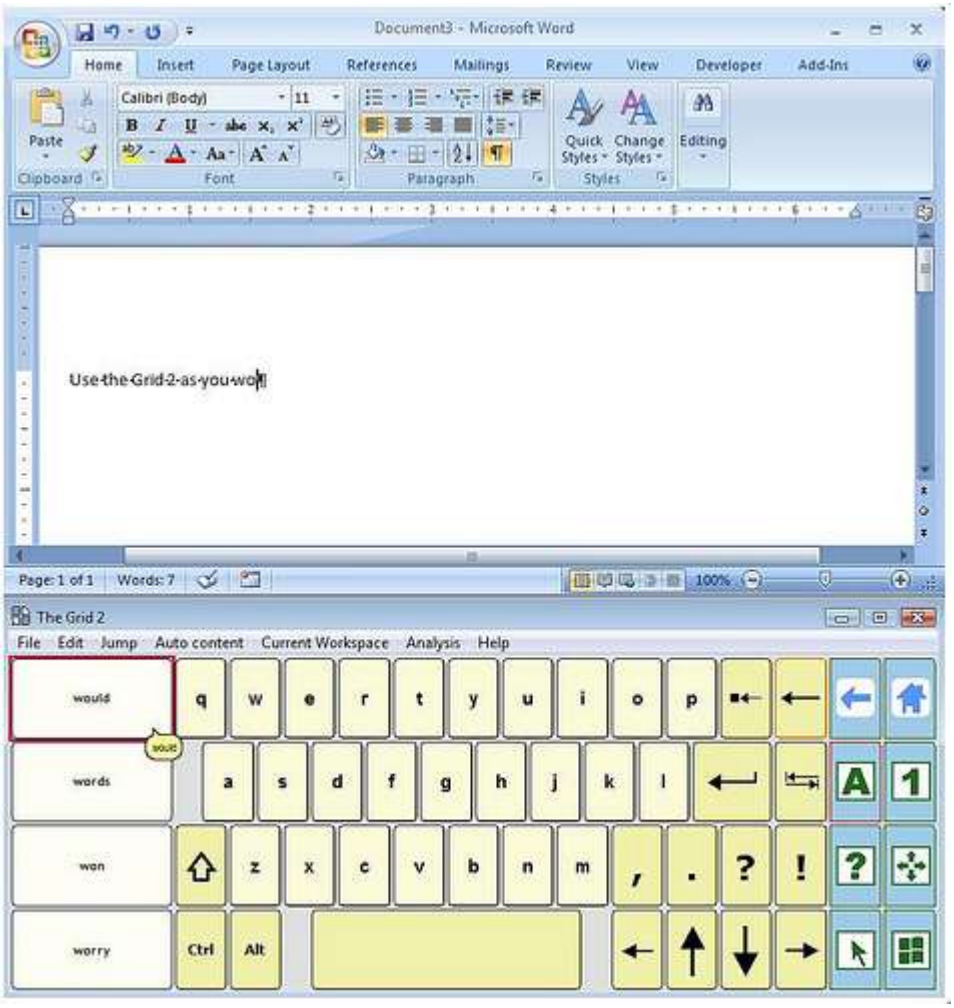
saving etc. The computer then interprets the spoken words, and either translates them into text on the screen, or carries out a function to control the computer. However, these are not a solution for everyone; the user needs to have consistent speech patterns, good literacy skills and computer skills. Given that most voice recognition systems are based on adult voices, they may be unsuitable for younger children.

Switch Accessible Software

Switch software is available in a variety of different levels: for very young children who need to learn about cause and effect, right up to advanced users in third level education or at work who need to produce extensive quantities of text.

On-screen keyboards which are switch accessible allow the user to type text using a keyboard on screen which is controlled via a switch connected to the computer via the serial or USB port. When the user hits his/her switch, each row of the on-screen keyboard is successively highlighted; the user then hits the switch again when the target row is highlighted, and again, when the target letter/word/keyboard function is highlighted. There are a wide range of scanning options to choose from in most switch accessible packages. Many on-screen keyboards also allow the user to control the mouse functions via the switch. This means that the user can have full access to, and control of the computer via a single switch.

Some users will use more than one switch to control the PC. The number of switches used depends upon the number of switches which the user can easily access.



Some examples of switch accessible software include

- The Grid from Sensory Software: https://www.sensorysoftware.com/thegrid2.html
- Grapevine Assistive Technology: http://www.grapevineat.ie/
- Switch Access for windows: http://acecentre.org.uk/special-access-to-windows
- Ease of Access Centre within Windows 7 and above also provides a switch access option within the On Screen Keyboard.

Contact Details

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Visit our e learning portal www.enableirelandat.com