



AT Guide to Software

There is a wide range of assistive technology software both commercially available and for free which can make a computer easier to use, see and understand. Some examples include literacy support software that supports reading and writing, switch access software that allows a user to control the keyboard or mouse, or screen reading and magnification to assist reading the screen.

In Built Accessibility Options

All the major operating systems such as Windows 7, iOS, OS X and Linux have in built accessibility features. These features can in various ways enable easier access to the computer. Because they are part of the operating system they work seamlessly throughout it. As they are at no extra cost they are a good starting point in making your computer easier to use.

For example in Windows 7 accessibility features you can:

- Change the size and color of the mouse pointer or use the keyboard to control the mouse.
- Colors can be adjusted to make the screen easier to see and unnecessary animations and background images can be removed.
- Use Speech Recognition to control your computer with voice commands, and dictate text into programs.
- Adjust the way Windows responds to mouse or keyboard input so that key combinations are easier to press, or inadvertent key presses are ignored.

It also includes:

- Magnifier - a program that magnifies a portion of your computer screen.
- Narrator - a program that reads the text on your screen aloud.
- On-Screen Keyboard. Lets you use your mouse or other device to interact with a keyboard on the screen.

Visual Support Software

- Screen readers

Screen reading software assists visually impaired or blind computer users to access computer functions, by listening to rather than looking at screen content. They use synthesised speech to read what is on the screen. A limited free version is included as a built in accessibility feature in Windows 7 called Narrator.

Commercial products include Jaws for Windows, SuperNova and Zoomtext.



- Screen Magnifiers

Screen magnification software programmes allow the user to increase the size of the text in a document, without increasing the size of the text printed out. It is aimed at users with impaired vision, and utilises whatever vision the user has to its maximum. The user may choose to magnify the entire screen, or may limit magnification to part of the screen. They often come with a document reader, whereby a synthetic voice speaks aloud the content of a text document.

A limited free version is also included as a built in accessibility feature in Windows 7.

- SuperNova screen magnifier and ZoomText screen magnifier

Commercially available tools include:

Jaws for Windows <http://www.freedomscientific.com>

SupaNova <http://www.yourdolphin.com>

Zoomtext <http://www.aisquared.com/>

Free tools include:

Virtual Magnifying glass <http://magnifier.sourceforge.net/>

LowBrowse <https://addons.mozilla.org/en-US/firefox/addon/8762>

System Access <http://www.serotek.com> ; <http://www.satogo.com>

Literacy Support Software

- Word Prediction

There are a variety of software packages which enhance the rate at which the user inputs text into the computer. These programmes attempt to predict the target word, based on the first letters typed by the user and the context of the sentence. Word prediction can be useful to support spelling, as well as to increase the rate of text produced, and more recent software versions also include a semantic prediction feature which attempts to predict not only on the basis of letters typed, but also on the basis of grammar or syntax used. So, for example, after the user has typed the word 'We', the word prediction feature will include in its list of predicted words: 'are', 'were', etc, but will not predict grammatically incorrect solutions such as 'is' or 'was'.

Many word prediction software applications also include a text reading feature with synthetic speech so that the user can re-check what he/she has written by having it read aloud.

- Reading and writing software

Hearing text read aloud with the words highlighted as they are spoken can improve comprehension level and word recognition. This is vital for those who struggle with reading or require support with reading. There are a number of programs that are design to assist with reading and writing such as Texthelp Read&Write, Kurzweil 3000 and Claread. They contain other features such as spell checkers, word prediction and dictionaries.



- Organisation software

Organisation software can help an individual to clearly express their thoughts when producing work or taking notes. Mind map software can visually outline information. They are often created around a single word or text, placed in the center, to which associated ideas, words and concepts are added. Major categories radiate from the central key word, and lesser categories are sub-branches of larger branches. Categories can represent words, ideas, tasks, or other items related to a central key word or idea. Free mind mapping software includes XMind and Free Mind. Inspiration and Kidspiration are commercial products.

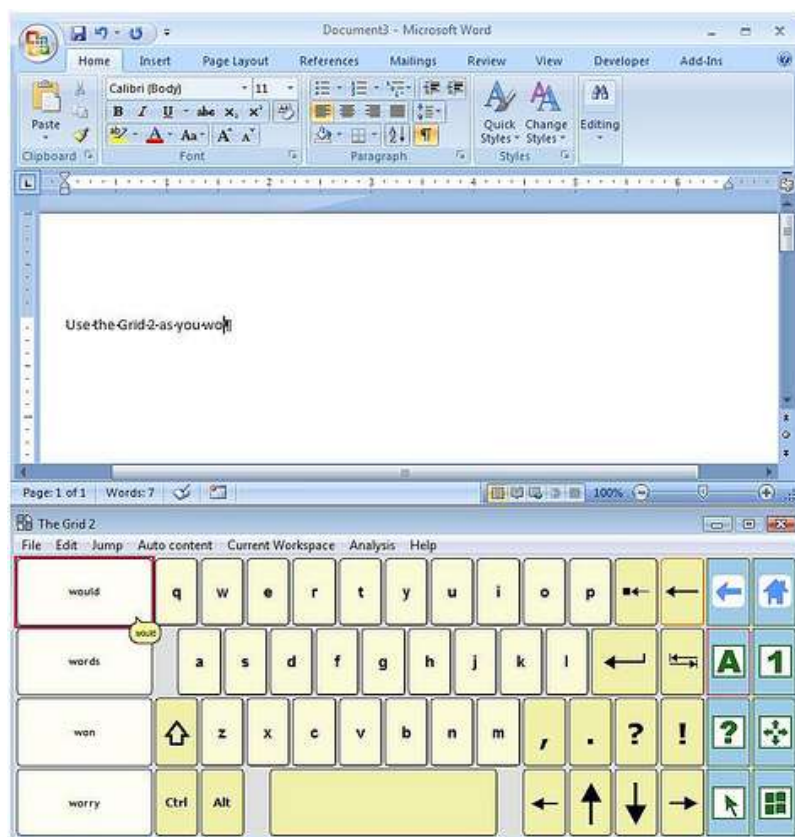
Switch Accessible Software

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's 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.



Maths support software

Writing with pen and paper can be a challenge for some individuals. An option is to use a mathematical equation editor on the computer.

MathType is a powerful interactive equation editor that lets you create mathematical notation for word processing. MathType has customizable keyboard shortcuts for virtually every symbol. Frequently used equations and expressions can be added to the MathType toolbar so they can be inserted later with just a click or a keystroke.

<http://www.dessci.com/en/products/mathtype/>

MathPad is an alternative and accessible tool used to support basic skill instruction in the areas of addition, subtraction, multiplication, and division. Math problems can be quickly entered, displayed in the appropriate format, and solved with minimum keystrokes, movements or prompting. MathPad is accessible through IntelliKeys, switches, a standard keyboard and the mouse.

<http://www.intellitools.com/mathpad.html>

Contact Details

National Assistive Technology Training Centre, Enable Ireland, Sandymount Avenue, Sandymount, Dublin 4.

Tel: 01 2184100 E-mail: at@enableireland.ie

[Visit our e learning portal www.enableirelandat.com](http://www.enableirelandat.com)