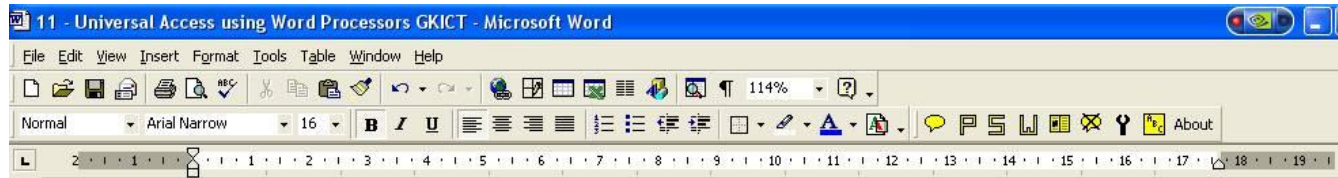


Title: **Universal Access using Word Processors**
 Author: Gerry Kennedy © March 2009
 Software: Word Processors and Text Editing software
 Category: Creating and accessing text in Word Processing and Text Editing Programs



1. Introduction

“Word processing is the creation of documents using a word processor program. It can also refer to advanced shorthand techniques, sometimes used in specialized contexts with a specially modified typewriter.”

A word processor (more formally known as *document preparation system*) is a computer application used for the production (including composition, editing, formatting, and possibly printing) of any sort of printable material.

Word processor may also refer to an obsolete type of stand-alone office machine, popular in the 1970s and 80s, combining the keyboard text-entry and printing functions of an electric typewriter with a dedicated computer for the editing of text. Although features and design varied between manufacturers and models, with new features added as technology advanced, word processors for several years usually featured a monochrome display and the ability to save documents on cassettes, memory cards or floppy diskettes. Later models introduced innovations such as spell-checking programs, increased formatting options, and dot-matrix printing. As the more versatile combination of a personal computer and separate printer became commonplace, the word processor disappeared.

They are descended from early text formatting tools (sometimes called *text justification tools*, from their only real capability). Word processing was one of the earliest applications for the personal computer in office productivity.

Although early word processors used tag-based mark-up for document formatting, most modern word processors take advantage of a graphical user interface. Most are powerful systems consisting of one or more programs that can produce any arbitrary combination of images, graphics and text, the latter handled with typesetting capability.

Microsoft Word is the most widely used computer word processing system; Microsoft estimates over five hundred million people use the Office Suite, which includes *Word*. There are also many other commercial word processing applications, such as *WordPerfect*, which dominated the market from the mid-1980s to early-1990s, particularly for machines running Microsoft's MS-DOS operating system. Open-source applications such as *Abiword*, *KWord*, *LyX* and *OpenOffice Suite Writer* are rapidly gaining in popularity. Online word processors such as *Google Docs* are a relatively new category. [Source: http://en.wikipedia.org/wiki/Word_processor]

2. Background to Text Editing and Word Processing Software

Electronic text files without formatting (as created with Windows Notepad or programs such as *TextEdit*) are known as plain text. This format is important because it is flexible and has total compatibility. File sizes are small (in terms of bytes), so can be transferred easily between PCs, laptops, Macs, Smartphones, Braille note-takers or USB thumb drives and opened with a massive choice of programs. Text can then be formatted and converted as required by the user and contains no inaccessible material so is entirely accessible to screen reader users or students using text-to-speech software programs.

3. Features and Functions of a Text Editing Program

Text editors (modern examples of which include *Notepad*, *BEdit*, *Kate*, *Gedit*), were the precursors of word processors. While offering facilities for composing and editing text, they do not format documents. This can be done by batch document processing systems. Text editors are now used mainly by programmers, website designers, and computer system administrators. They are also useful when fast start-up times, small file sizes, editing speed and simplicity of operation is preferred over formatting. They can be used to generate or edit HTML code and many have additional features over and above the MAC OS or MS Windows OS packaged versions.

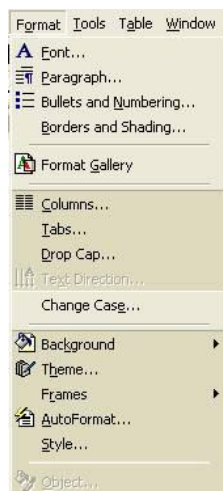
A text editor is a type of program used for editing plain text files. These are usually small programs that take up little hard disk space and launch very quickly. Text editors are often provided with operating systems or software development packages, and can be used to change configuration files and programming language source code.

There are important differences between plain text files created by a text editor, and document files created by word processors such as *Microsoft Word*, *WordPerfect*, or *OpenOffice Writer*. Briefly:

- A plain text file is represented and edited by showing all the characters, as they are present in the file. The only characters usable for 'mark-up' are the control characters of the used character set; in practice this is new line, tab and form feed. The most commonly used character set is ASCII, especially recently, as plain text files are more used for programming and configuration and less frequently used for documentation than in the past.
- Documents created by a word processor generally contain file format-specific "control characters" beyond what is defined in the character set. These enable functions like bold, italic, fonts, columns, tables, etc. These and other common page formatting symbols were once associated only with desktop publishing but are now commonplace in the simplest word processor.
- Word processors can usually edit a plain text file and save in the plain text file format. However one must take care to tell the program that this is what is wanted. This is especially important in cases such as source code, HTML, and configuration and control files. Otherwise the file will contain those "special characters" unique to the word processor's file format and will not be handled correctly by the utility the files were intended for.

[http://en.wikipedia.org/wiki/Text_editor]

Text files are much more useful when using text-to-speech programs, in such instances as reading emails, study notes and eBooks. Sites including www.gutenberg.org provide over 28,000 books in a number of formats. Other sites include <http://www.bookshare.org/>, <http://www.baen.com/library/>, <http://www.fictionwise.com/eBooks/freebooks.htm?cache> and <http://manybooks.net/> and all offer a number of alternate formats.



1. Features and Functions of a Word Processing Program

Word processing typically refers to text manipulation functions such as automatic generation of:

- Indices of keywords and their page numbers
- Tables of contents with section titles and their page numbers
- Tables of figures with caption titles and their page numbers
- Batch mailings using a form letter template and an address database (also called *mail merging*)
- Cross-referencing with section or page numbers
- Footnote numbering, headers and footers
- Chapters and section formatting
- New versions of a document using variables (e.g. model numbers, product names)

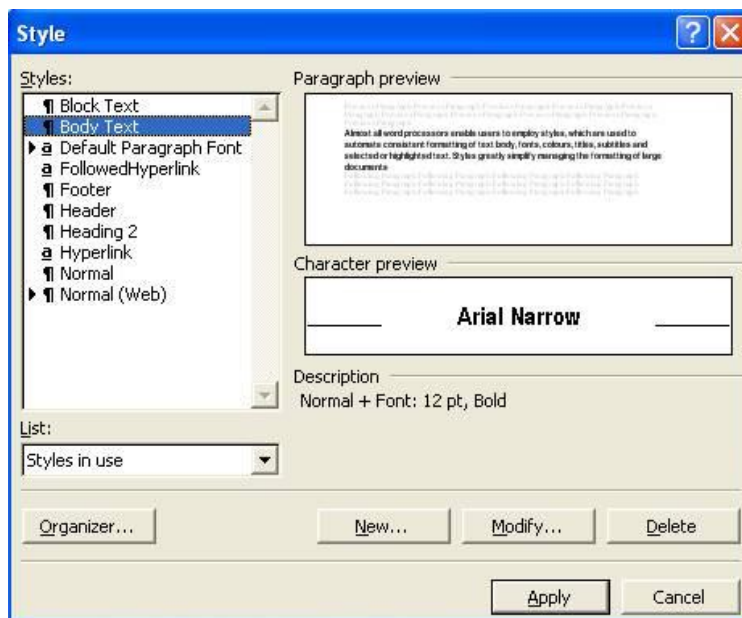
Other word processing functions include "spell checking" (actually checks against wordlists), "grammar checking" (checks for grammar errors), and a "thesaurus" function (finds words with similar or opposite meanings).

In most languages grammar is very complex, so grammar checkers tend to be unreliable and not always accurate or helpful. It can sometimes cause students to become confused with what is promoted to them.

Other common features include collaborative editing, comments and annotations, support for images, diagrams, video and sound files and internal cross-referencing.

Word processors can be distinguished from several other related forms of software, such as text editors and notepad utilities. Later desktop publishing programs (first seen predominantly on MAC OS computers) were specifically designed to allow elaborate layout for printing and publication, but offered only limited support for editing. Typically, desktop publishing programs allowed users to import text that has been previously written using a text editor or word processor.

Almost all word processors enable users to employ *styles*, which are used to automate consistent formatting of text body, fonts, colours, titles, subtitles and selected or highlighted text.



Styles greatly simplify managing the formatting of large documents, since changing a style automatically changes all text that has been applied to the style. Even in shorter documents styles can save a great deal of time while formatting. The default styles and examples in MS Word are rarely changed as many teachers and their students do not realise that they exist!

2. Commercial and Free Software – Word Processors

a. WP - Commercial Software

MS Office – Windows Versions www.microsoft.com (MS Office 97/ 2000/ 2003 / 2007)

MS Office for MAC OS www.microsoft.com (MS Office 98 to 2008)

The versions of *MS Word* are the leading applications in office suite technology and most often used in education and commerce. There is a free download of MS Word Viewer 2003 -

<http://www.microsoft.com/downloads/details.aspx?FamilyId=95E24C87-8732-48D5-8689-AB826E7B8FDF&displaylang=en> that will allow you to open, view, read and print a Word file even if you do not own a copy of the program.

Corel WordPerfect Office X4 <http://www.corel.com/servlet/Satellite/au/en/Product/1207676528492#tabview=tab0>
WordPerfect Office X4 is the most recent version of the popular office suite from *Corel*.

- ❖ An alternative to Microsoft Office
- ❖ *WordPerfect WP* application is included in this office suite from Corel – formerly a leader in this genre
- ❖ Corel WordPerfect Office includes word processing, spreadsheets, presentations & email.
- ❖ World's first hybrid on and offline office suite.
- ❖ First PDF office suite, supporting an advanced PDF workflow
- ❖ First format-neutral office suite, supporting more than 60 file formats including ODF, OOXML and Office 2007
- ❖ Also includes a handy research and note-booking tool

Lotus Symphony Documents http://symphony.lotus.com/software/lotus/symphony/home.nsf/product_wpe

- ❖ Easy to create documents with predefined document templates
- ❖ Fast formatting with predefined styles for paragraphs, characters, and headings
- ❖ Contextual toolbars and editing menus
- ❖ Inline spell checking and correction
- ❖ Graphics that you can insert to create a variety of tables, charts, diagrams, and drawn items
- ❖ Automatic creation of a table of contents, footnotes, indexes and footers and headers
- ❖ Support for a variety of file types, including *Microsoft Office* and *Lotus SmartSuite*
- ❖ Export documents to *Adobe PDF* format for easy sharing

Lotus Symphony for Mac V1.2.1 <http://symphony.lotus.com/software/lotus/symphony/home.nsf/mac>

Lotus Symphony 1.2.1 is available for Mac OS X 10.5(Intel). Lotus Symphony 1.2.1 combines the functionality of the Mac OS platform with a clean interface for a combination of innovation and simplicity for office productivity applications. Lotus Symphony not only works on Mac OS X but also is optimised to take advantage of the elegance of Aqua GUI theme with the innovation and simplicity of MAC OS and is available in 18 languages.

AppleWorks 6.2.9 for Mac OS <http://www.apple.com/au/appleworks/>

It offers numerous built-in assistants or templates — or a blank slate in one of the six modules. AppleWorks includes functions for word processing, spreadsheets, painting, drawing, presentations and databases. Students can also work with Microsoft Word and Excel documents with the included file translators — even in the 2001 editions.

MS Works 9 <http://www.microsoft.com/products/Works/default.mspg>

These suites have been available for a number of years. The look and feel in “works” suites is usually similar to that of the MS Office Suites, but is more affordable packages.

b. WP – Freeware or Operating System Programs

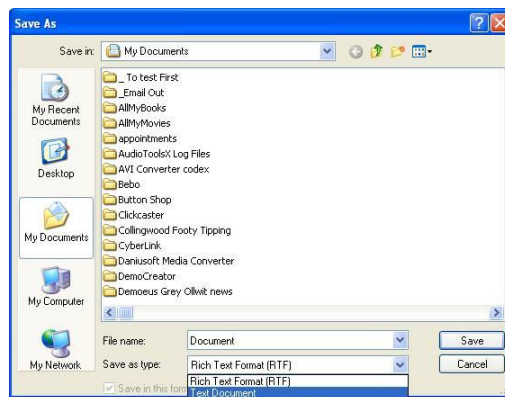
Open Office Suite 2009 http://openoffice.org-2009.com/index.asp?aff=101&camp=gg_oo_au&se=google

It is a fully compatible Office Suite that includes Writer, an equivalent program to MS Word. It can open and save MS Word documents, as well as text, RTF and even PDF.

- ❖ Create Writer word processing files and then import into ‘Impress’ Presentations
- ❖ Open MS Word, Excel & Power Point files
- ❖ Read and Write PDF files just like Adobe
- ❖ Improved Features of MS Office
- ❖ Hundreds of Open Office Templates are available

MS Windows – WordPad Part of MS Windows OS

WordPad is an extremely useful program that has a number of basic features. Many students benefit from its simplicity and lack of toolbar



options. Text files can be saved using SAVE AS, choosing the Text Document option.



AbiWord V2.6.9 <http://www.abisource.com/>

AbiWord is a free word processing program similar to MS Word. It is suitable for a wide variety of word processing tasks. AbiWord is unique among word processors in it being a fully cross-platform word processor. AbiWord will run on virtually any operating system including *MS Windows*, *Linux* and *Mac OS*. This combined with the support for internationalisation (the ability to run AbiWord in many languages) gives AbiWord a massive potential user-base.

Suffice to say that AbiWord 2.6.8 is an award winning, small, fast, fully featured and cross- platform word processor

Free Software – Text Editors

MS Windows – Notepad Part of MS Windows operating system

Zulu Pad

<http://prashantsarkar.blogspot.com/2006/08/zulu-pad-smart.html>

Zulu Pad is a personal *wiki* notepad - a smart cross between a notepad and a desktop wiki! It automatically and smartly links all users' notes together using hyperlinks

BEdit

<http://www.barebones.com/products/bbedit/> (MAC OS)

BEdit is a leading professional HTML and text editor for the Macintosh. Specifically crafted in response to the needs of Web authors and software developers, BEdit provides an abundance of high-performance features for editing, searching, and manipulation of text. Useful features, including grey pattern matching, search and replace across multiple files (even unopened files on remote servers), and project definition tools.

Gedit

<http://projects.gnome.org/gedit/>

Lightweight editing tool for the GNOME desktop found in many distributions of *Linux*, *BSD* and other *Unix* systems.

6. Web Based Word Processing Tools

Google Docs

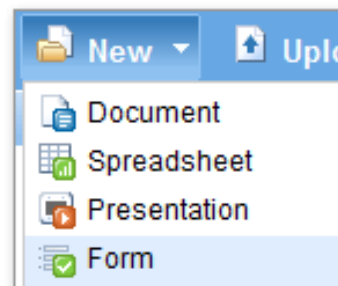
<https://www.google.com/accounts/ServiceLogin?service=writely&passive=true&nui=1&continue=http%3A%2F%2Fdocs.google.com%2F&followup=http%3A%2F%2Fdocs.google.com%2F<mpl=homepage&rm=false>

The latest software for word processing and text entry is also on the web with programs such as *Google Docs*. This software is accessed and used whilst online. It is anywhere, anytime access to software without the need for a program to be installed on a computer – or a particular version. It is a wonderful collaboration tool as users can work with documents and share information online, as well as providing opportunities to provide access to student's documents to particular users (e.g. teachers or tutors). It saves creating documents and then either emailing them or saving them to CDs DVDs or USB drives and physically 'handing them over' to another person. This may create problems, as there will be multiple copies in circulation. Tracking and maintaining the original and most current version may cause issues with some users.

By creating, storing, sharing and collaborating online, one master copy exists, which is obtainable from any Internet, based computer. The downside is when the Internet is not available; a server or web service is not operating.

Create and share student work online

- Upload from and save to the desktop
- Determine and choose who can access documents
- Share changes in real time
- Files are stored securely online – accessed from any computer, anywhere, anytime
- Another great benefit – is that it is free to use the software!



A comprehensive list of new features can be located at: <http://www.google.com/google-d-s/whatsnew.html>

Google Docs

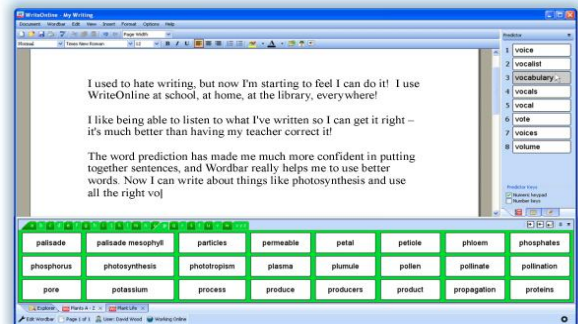
WriteOnline

<http://www.cricksoft.com/uk/writeonline/>

This is a similar commercial venture by Crick Software, the publishers of *Clicker 5* software. It goes many steps further with scaffolding supports including text to speech, word prediction, onscreen grids, visual supports and master templates and features that are available to individual users at home, school, TAFE or University. Once customised and set up, the programs and features 'travel' with the student, wherever they choose to work.

Students will be familiar with WriteOnline's menus and toolbar because it follows modern standards. WriteOnline offers a range of writing support features not found in any other writing tool.

Students can use it on any computer, anywhere.



WriteOnline's clear voice enables students to review what they have written. T active engagement with text encourages students to find and correct errors for themselves. And they can also opt to develop writing independence with word prediction using *Workflow™* technology. It predicts as students type, suggesting words that fit the context of their writing. Students' confidence grows as they compose flowing text with accurate spelling and grammatically correct sentences.

Wordbar brings curriculum writing tasks within the reach of all learners by giving instant point-and-click access to specific words and phrases for a large range of writing tasks. Teachers and educators can design and create their own Wordbars, and there are hundreds of ready-made ones in the program and available freely on the web.

Luminotes

<http://luminotes.com/> (An example of a *Web 2* tool)

Luminotes is a WYSIWYG personal wiki notebook for organizing your notes and ideas. It's designed for note taking and note keeping without the hassle of learning special markup codes. You simply start typing. Luminotes is open source / free software. Potential uses may include:

- Outline a story, a text response, persuasive essay or write a poem
- Plan a trip, an excursion, camp or event
- Collect recipes, formulas, information and record data
- Students record their ideas and thoughts, with references or links to other sites
- Keep track of student or class tasks
- Take notes – anywhere, anytime
- Collaborate with other users and share notes

Portable Apps

The popular *AccessApps* is now part of *EduApps* - <http://www.rsc-ne-scotland.ac.uk/accessapps/>. It is one part of a growing suite of portable applications that can be freely downloaded from the web, and installed onto a 4GB or higher capacity USB thumb drive. It contains *Open Office Org* as well as *AbiWord* word processor. It also offers access to PDF files with *Sumatra PDF* and *Foxit Reader*, two mind mapping tools – *Freemind* and *Xmind* and a reader designed for dyslexics - *PowerReader*.

These portable applications are literally available to students using MS Windows computers. Not only are the word processor text creation tools available to them, but they can store the information of the thumb drive as well. They are completely independent of others who in the past would have had to install and configure software.

In addition, they can customise the toolbars and performance of programs such as *Open Office Writer* and save their work in compatible formats (e.g. read, write and save *MS Word 2003* documents) as well as to plain text, RTF, HTML and PDF formats. They are in charge, they are independent and the software is fully portable and accessible.

8. Universal Access Using Word Processors

a. Useful Features

There are many handy features that can assist students when using MS Word. Using keyboard shortcuts can save time, effort and having to continually locate the mouse. They are exceptionally useful for students who are blind, vision impaired or who find using a pointing device difficult – or impossible!

Simple strategies such as pressing *Ctrl-2* or *Ctrl-5* will change line spacing to double or one and a half spacing. Double clicking on a word will highlight it. Double-clicking in the margin will highlight a paragraph, with three clicks highlighting or selecting the entire document (also *Ctrl-A*). *Ctrl S* brings up the Save dialogue box, with *Ctrl-P* the print window. *Ctrl-Z* undoes the last action (or the redo function), *Ctrl-X* cuts, *Ctrl-C* copies with *Ctrl-V* pasting.

With text selected, *Ctrl-I* will action italics, *Ctrl-B* boldfacing and *Ctrl-U* underling it. By knowing and using a series of keyboard shortcuts, students can be faster and more productive. Of course, students are blind and severely vision impaired need to know all of these commands, remember them and then apply them!

Students can work with tables; insert graphics, sounds and video. Files, data and formula can be imbedded from *Access* and *Excel* as well as other leading programs. Software including *Inspiration* and *Spark Space Educator* can be used to work with mind maps and then export to MS Word format.

Text can be assigned a style that can be selected and used for headings and body text, with sub headers for consistency and ease of reading. A summary can be generated as well as word count and even a Flesch Kincaid Reading level!

b. Powerful Addins

WordTalk – this is a free utility that imbeds itself as a toolbar in *MS Word 97, 2000* and *2003* and as an addin toolbar in *MS Office 2007*. It provides text-to-speech with a spell checker and thesaurus. For students with reading and writing difficulties, having text reinforced by hearing it read aloud can be very useful. Specialised programs have existed to do this for a long time, and in many cases are extremely helpful and highly appropriate and should be seriously considered, perhaps in consultation with professional advice where necessary.

WordTalk, though, is a free text-to-speech plugin developed for use with all versions of Microsoft Word (from Word 97 upwards). It will speak the text of the document and will highlight it as it goes. <http://www.wordtalk.org.uk/Home/>

c. Powerful supports

The Sage	A free thesaurus - http://www.sequencepublishing.com/thesage.html
WordWeb	A free thesaurus - http://wordweb.info/free/ - initially designed for users to 'cheat' at crosswords!
TinyTalk	A small, handy spell checker that sits in the task bar, watching for spelling errors - http://tinyspell.m6.net/

8. Dedicated Word Processors for Younger Students

Clicker 5 www.cricksoft.com

A multi faceted program with numerous supports and access input methods built in. Suited to primary aged students and other older students with significant learning, cognitive, processing and/or access needs. It provides a range of learning supports, text-to-speech, graphics library and onscreen templates and grids.

TextEase Publisher CT http://www.east-west.com.au/catalog/product_info.php?products_id=406

TextEase Publisher CT is an award-winning word processing and desktop publishing package with multimedia capabilities.



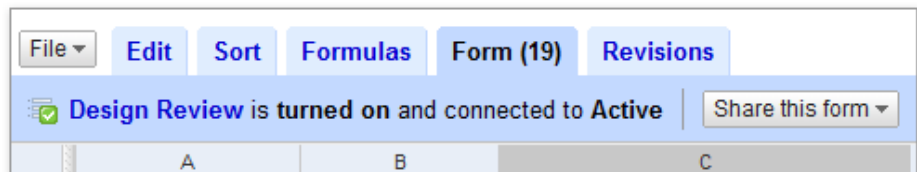
Communicate: SymWriter <http://www.spectronicsinoz.com/product/25254>

Communicate: SymWriter provides a useful and versatile tool for simple word and symbol processing for emergent writers. It enables users to see the meaning of words as they write. The symbols appear automatically in a side panel, illustrating the word just typed or chosen. Non-keyboard users can write in very flexible ways by selecting from grids and buttons.

9. In Conclusion

There are many different options for entering, storing, editing, Reversioning, collaborating, sharing and printing text. All applications serve a purpose. Some students will require very simple solutions. Others will need additional supports. Yet others will want to insert all manner of media and work with other applications and hyperlink to web sites and documents on servers and HTML code. Some might want to program, with others wanting high quality desktop publishing features to layout text in a variety of ways. Students studying and undertaking graduate or post graduate studies will require headers, footers, sections, chapters and foot noting.

Younger or less capable students may require instant symbols or graphic supports, onscreen word banks, pop up onscreen keyboards, text-to-speech or word prediction.



Most users require a good reliable spell checker; possibly in league with a phonetic spell checker as in a literacy support program textHELP Read and Write software.

More and more we see younger users working online or with portable applications. This means that they can access and work with text, data and documents on any preferred computer at their disposal. Long gone is a dedicated computer terminal that just performed basic word processing and data entry (as in the early Wang terminals).

Resources:

<http://texteditors.org/cgi-bin/wiki.pl> This links to <http://TextEditors.org>, the home for text editor reviews, analysis, and commentary by the community. It stores the largest collection of text editor information on the web and has been designed to be as inclusive as possible, including any platform, any OS, any chip, any language.



A useful definition and explanation of word processing and the various associated functions in plain English can be located at http://www.webopedia.com/TERM/W/word_processing.html.

A handy and useful Blog can be found at <http://wordprocessing.about.com/b/>. About.com has quite a few practical fact sheets and user guides, <http://wordprocessing.about.com/>.

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