WordSmith Tools

Version 5.0

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WordSmith Tools

version 5.0

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by Mike Scott

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WordSmith Tools

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Printed: January 2009

Publisher

Lexical Analysis Software
Liverpool

Special thanks to:

All the people who contributed to this document by testing WordSmith Tools in its various incarnations. Especially those who reported problems and sent me suggestions.

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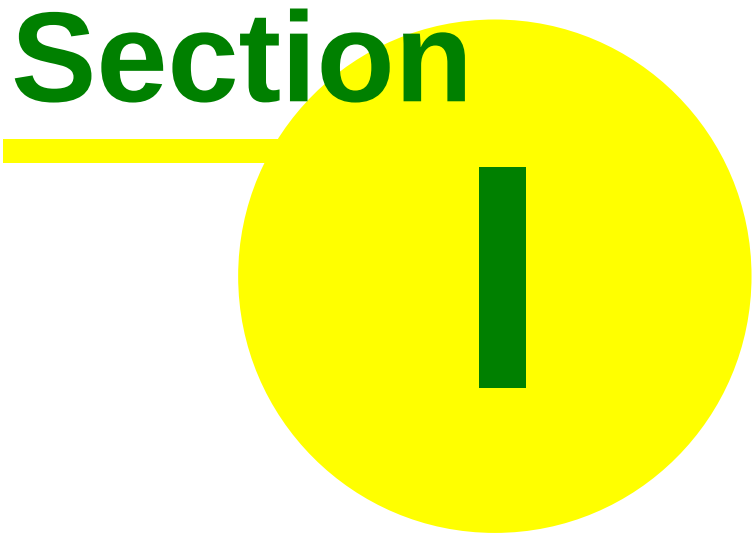
WordSmith Tools



1 WordSmith Tools

WordSmith Tools is an integrated suite of programs for looking at how words behave in texts. You will be able to use the tools to find out how words are used in your own texts, or those of others.

The **WordList** tool lets you see a list of all the words or word-clusters in a text, set out in alphabetical or frequency order. The concordancer, **Concord**, gives you a chance to see any word or phrase in context -- so that you can see what sort of company it keeps. With **KeyWords** you can find the key words in a text.

The tools have been used by Oxford University Press for their own lexicographic work in preparing dictionaries, by language teachers and students, and by researchers investigating language patterns in lots of different languages in many countries world-wide.

Getting Help

Online step-by-step screenshots showing what WordSmith does.

Most of the menus and dialogue boxes have help options. You can often get help just by pressing F1 or ?, or by choosing Help (at the right hand side of most menus). Within a help file (like this one) you may find it easiest to click the Search button and examine the index offered, or else just browse through the help screens.

See also: getting started straight away with WordList 14, Concord 12, or KeyWords 13.

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Overview

2 Overview

2.1 Requirements

WordSmith Tools requires

1. a reasonably up-to-date computer 279
2. running Windows 2000 279 or later
3. your own collection of text in plain text format or converted 228 to plain text

2.2 What's new in version 5

WordSmith is organic software!

Version 4 was a complete new re-write. Since it was launched in 2004, numerous re-compilations of WS4 were issued (about one a week on average), sometimes with a very small bug-fix but other times incorporating changes users had suggested. At the same time the Help was updated. Version 5.0 was started in June 2007, three years after version 4.0 and will continue this organic policy of growth...

New features:

- Follow-up 117 concordance searches
- Installation 17 to a removable drive (eg. flash drive, USB drive).
- File Viewer 212 utility
- Corpus Corruption detector 6
- Text Converter converts from .PDF, .DOC, removing all mark-up, lemmatising 228, etc.
- new WSConcGram 10 tool

2.3 Controller

This program controls the Tools. It is the one which shows and alters current defaults, handles the choosing of text files, and calls up the different Tools.

It will appear at the top left corner of your screen.

You can minimise it, if you feel the screen is getting cluttered 74.

For a step-by-step view with screenshots, click here to visit the WordSmith website.

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2.4 Concord

Concord is a program which makes a concordance 94 using DOS, Text Only, ASCII or ANSI text files.

To use it you will specify a search word, which Concord will seek in all the text files you have chosen. It will then present a concordance display, and give you access to information about collocates of the search word.

Listings can be saved 106 for later use, edited, printed, copied to your word-processor, or saved as text files.

See also: Concord Help Contents Page 93, The buttons 279

2.5 KeyWords

The purpose of this program is to locate and identify key words in a given text. To do so, it compares the words in the text with a reference set of words usually taken from a large corpus of text. Any word which is found to be outstanding in its frequency in the text is considered "key". The key words are presented in order of outstandingness.

The distribution of the key words can be plotted 148.

Listings can be saved 66 for later use, edited, printed, copied to your word-processor, or saved as text files.

This program needs access to 2 or more word lists, which must be created first, using the Word List 5 program.

See also: KeyWords Help Contents Page 138, The buttons 279

2.6 WordList

This program generates word lists based on one or more plain text 264 files. Word lists are shown both in alphabetical and frequency order. They can be saved 66 for later use, edited, printed, copied to your word-processor, or saved as text files.

See also: WordList Help Contents Page 156, The buttons 279

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2.7 Utilities

2.7.1 Choose Languages

A tool for selecting Languages which you want to process.
You will probably only need to do this once, when you first use WordSmith Tools.

See also: Choose Language Tool 205

2.7.2 Corpus Corruption Detector

A tool to go through your corpus and seek out any text files which may have become corrupted. Works in any language.

See also: detecting corpus corruption 202

2.7.3 File Utilities

Programs to

- compare two files 218
- cut large files into chunks 218
- find duplicate files 219
- rename 220 multiple files
- find "holes 302" in text files
- split large files into their component texts 214
- join up 216 a lot of small text files into merged text files

2.7.4 File Viewer

A tool for viewing how your text files are formatted in great detail, character by character.

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See also: File Viewer Index 205

2.7.5 Minimal Pairs

a program to find typos and minimally-differing pairs of words.

See also : aim 209, requirements 209, choosing your files 210, output 210, rules and settings 210, running the program 211.

2.7.6 Splitter

Splitter is a utility which splits large files into small ones for text analysis purposes. You can specify a symbol to represent the end of a text (e.g. </Text>) and Splitter will go through a large file copying the text; each time it finds the symbol it will start a new text file.

See also: Splitter Help Contents Page 214

2.7.7 Text Converter

Text Converter is a general-purpose utility which you use for three main tasks: to edit your texts, to rename text files, to change file attributes, to move files into a new folder if they contain certain words or phrases.

The main use is to replace strings in text files. It does a "search and replace" much as in word-processors, but it can do this on lots of text files, one after the other. As it does so, it can also replace any number of strings, not just one.

It is very useful for going through large numbers of texts and re-formatting them as you prefer, e. g. taking out unnecessary spaces, ensuring only paragraphs have <Enter> at their ends, changing accented characters.

See also: Text Converter Help Contents Page 221

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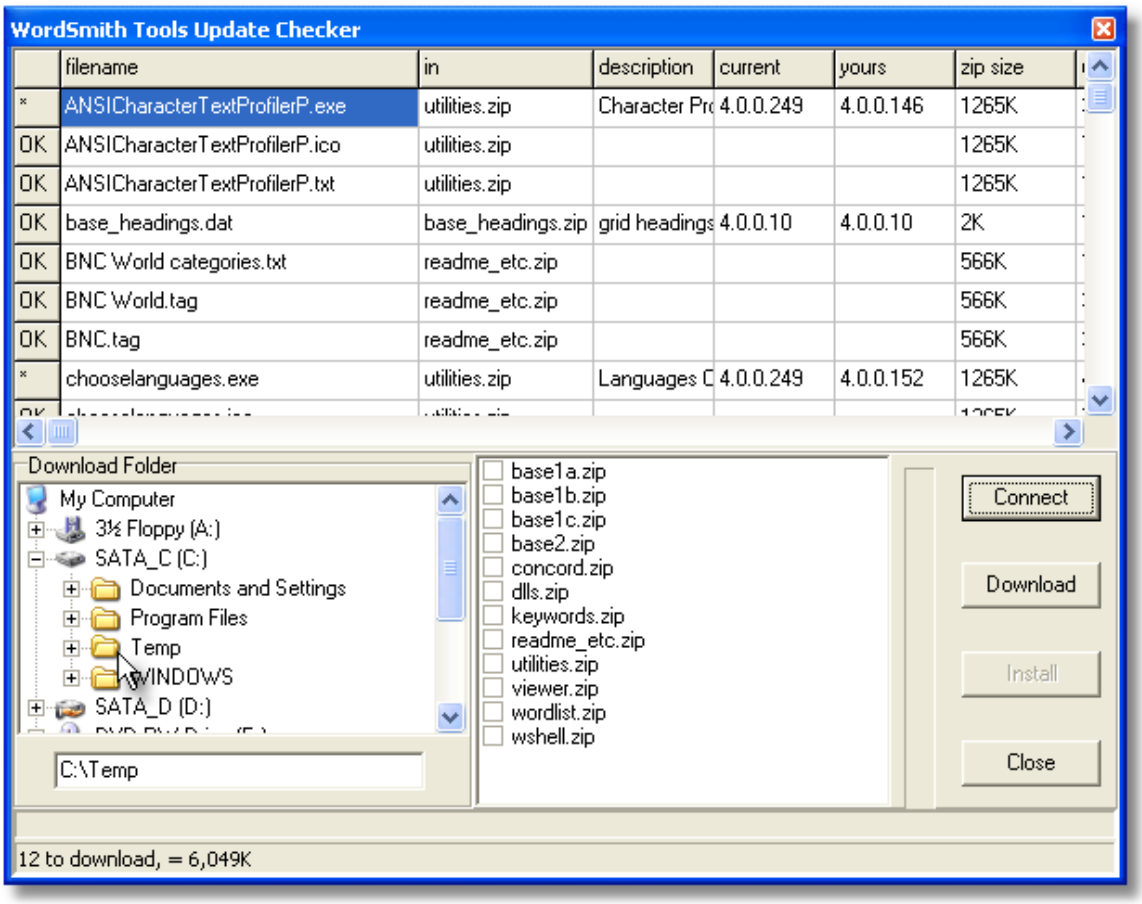
2.7.8 Version Checker

5.0

A tool to check whether any components of your current version need updating and if so, download them for you. Accessed via the main Controller menu, File | Web version check.

When you run the program, after pressing Connect, you see something like this:



The various components of WordSmith are listed in the top window and the current version is compared with your present situation. If they are different, all the files in the relevant zip file will be starred (*) in the left margin.

By default you will download to wherever WordSmith is already but you're free to choose somewhere else as in the screenshot where c:\temp has been chosen. Press Download if you wish to get the updated files.

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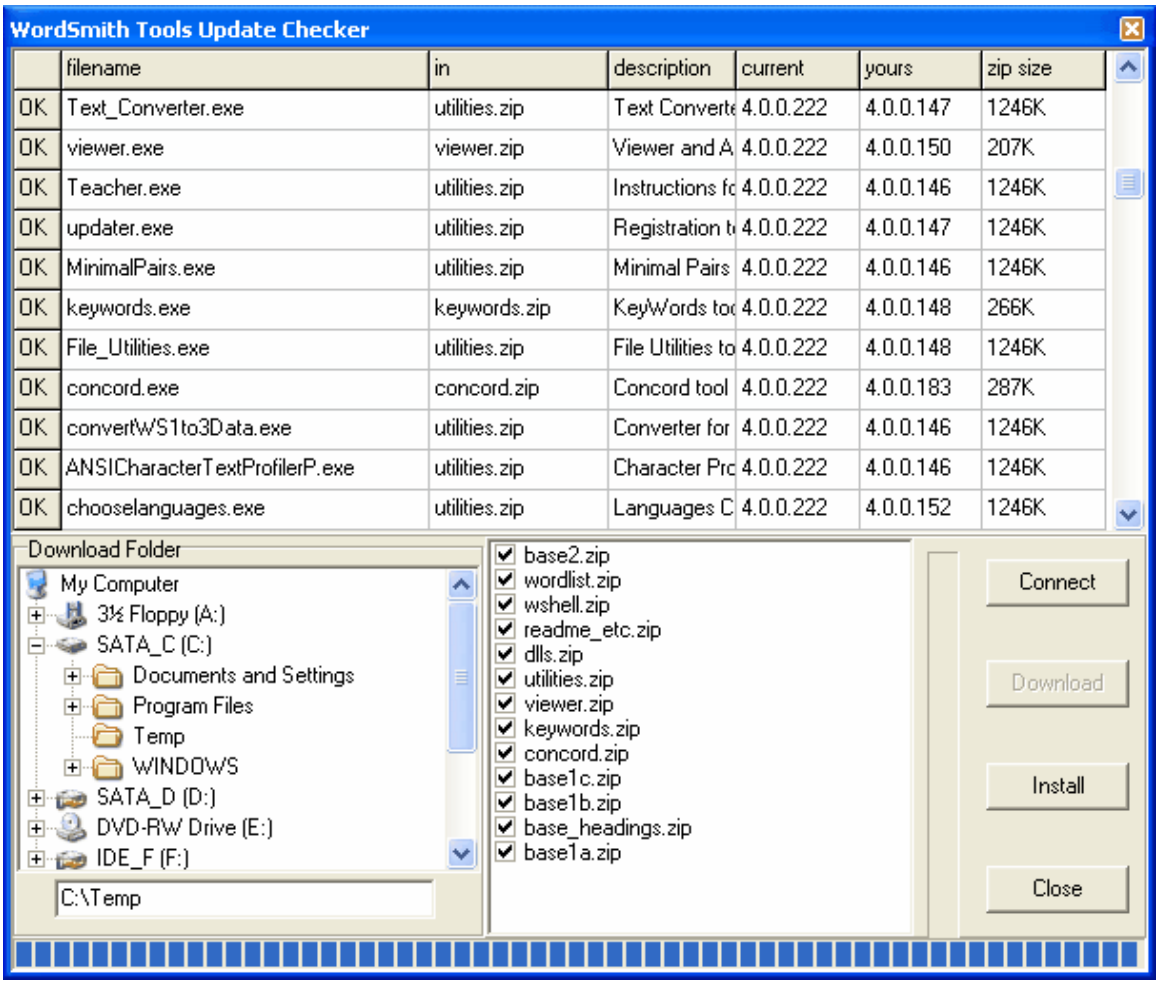

After the download, the various .zip files are checked (bottom right window) if downloaded successfully, and the Install button is now available for use. Install unzips all those which are checked.

2.7.9 Viewer

Viewer & Aligner is a utility which enables you to examine your files in various formats. It is called on by other Tools whenever you wish to see the source text.

Viewer & Aligner can also be used simply to produce a copy of a text file with numbered sentences or paragraphs 253 or for aligning 249 two or more versions of a text, showing alternate paragraphs or sentences of each.

See also: Viewer & Aligner Help Contents Page 248

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2.7.10 Webgetter

A tool to gather text from the Internet.

The point of it...
The idea is to build up your own corpus of texts, by downloading web pages with the help of a search engine.

See also: A fuller overview 198, Settings 199, Display 200, Limitations 201

2.7.11 WSConcGram

a tool for generating concgrams 234.

See also : Aims of WSConcGram 234, Running WSConcGram 237

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Getting Started

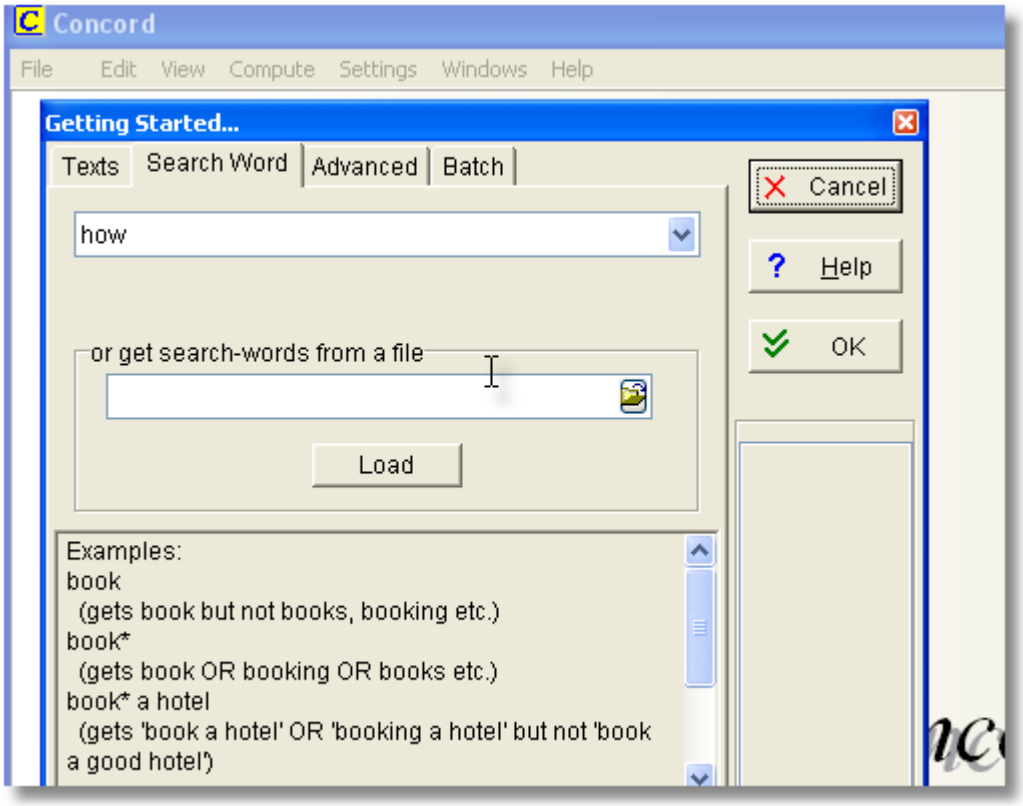
3 Getting Started

3.1 getting started with Concord

For a step-by-step view with screenshots, visit the WordSmith website.

In the main WordSmith Tools window (the one with WordSmith Tools Controller 4 in its title bar), choose the Tools option, and once that's opened up, you'll see the Concord button. Click and the Concord tool will start up.

You should now see a dialogue box which lets you choose your texts 31 or change your choice, and make a new concordance, looking somewhat like this:



(If you only see the window with Concord in its caption, choose *File* | *New* ( ) and the Getting Started window will open up.)

If you have never used WordSmith 59 before you will find a text has been selected for you automatically to help you get started.

You will need to specify a Search-Word or phrase 129 and then press OK ( ).

While Concord is working, you may see a progress indicator like this.

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Here, we have 552 entries so far, and the last one in shows the context for *worse*, our search-word.

If you want to alter other settings, press Advanced 133, but you can probably leave the default settings as they are.

Concord now searches through your text(s) looking for the search word or Tag 112.

Don't forget to save the results 106 (press F2 or) if you want to keep the concordance for another time.

See also: Concord Help Contents 93.

3.2 getting started with KeyWords

For a step-by-step view with screenshots, visit the WordSmith website.

In the main WordSmith Tools window (the one with WordSmith Tools Controller 4 in its title bar), choose the Tools option, and once that's opened up, you'll see KeyWords. Click and KeyWords will open up.

Choose File | New

You see a dialogue box which lets you choose your wordlists 140. You'll need to choose two word lists to make a key words list from: one based on a single text (or single corpus), and another one based on a corpus of texts, enough to make up a good reference corpus for comparison.

You will see two lists of the word list files in your current word-list folder. If there aren't any there, go back to the WordList tool and make some word lists. Choose one small word list above, and a reference corpus 284 list below to compare it with. With your texts selected, you're ready to do a key words analysis. Click on make a keyword list now.

You'll find that KeyWords starts processing your file and a progress 70 window in the main Controller shows a bar indicating how it's getting on. After KeyWords has finished, it will show you a list of the key words. The ones at the top are more "key" than those further down.

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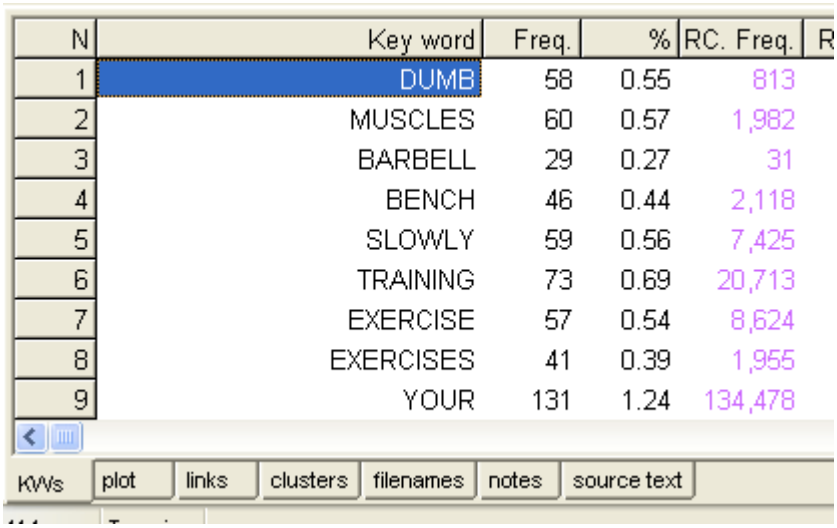

N	Key word	Freq.	%	RC. Freq.	R
1	DUMB	58	0.55	813	
2	MUSCLES	60	0.57	1,982	
3	BARBELL	29	0.27	31	
4	BENCH	46	0.44	2,118	
5	SLOWLY	59	0.56	7,425	
6	TRAINING	73	0.69	20,713	
7	EXERCISE	57	0.54	8,624	
8	EXERCISES	41	0.39	1,955	
9	YOUR	131	1.24	134,478	

KWs | plot | links | clusters | filenames | notes | source text

Don't forget to save the results 66 (press F2) if you want to keep the keyword list for another time.

See also: KeyWords Help Contents 138, What's it for? 138

3.3 getting started with WordList

For a step-by-step view with screenshots, visit the WordSmith website.

I suggest you start by trying the WordList program. In the main WordSmith Tools window (the one with WordSmith Tools Controller 4 in its title bar), choose the Tools option, and once that's opened up, you'll see WordList. Click and WordList will open up.

Choose File | New

You will see a dialogue box which lets you choose your texts 31 or change your choice, and make a new word list.

If you have never used WordSmith 59 before you will find a text has been selected for you automatically to help you get started.

There are other settings which can be altered via the menu, but usually you can just go straight ahead and make a new word list, individually or as a Batch 26.

You'll find that WordList starts processing your file(s) and a progress 70 window in the main Controller shows a bar indicating how it's getting on. After WordList has finished making the list, you will see some windows showing the words from your text file in alphabetical order and in frequency order, statistics, filenames, notes.

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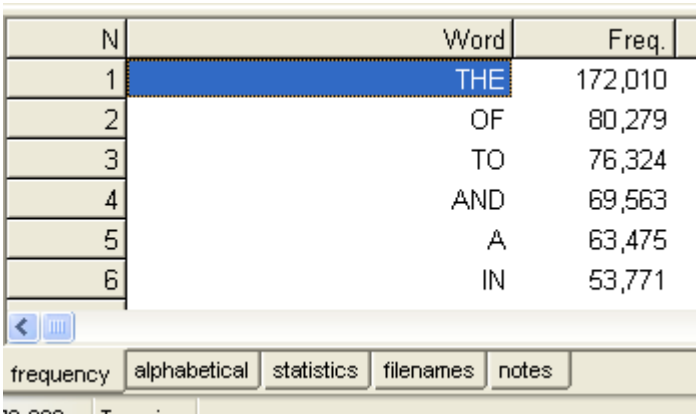

N	Word	Freq.
1	THE	172,010
2	OF	80,279
3	TO	76,324
4	AND	69,563
5	A	63,475
6	IN	53,771

Don't forget to save the results 66 (press F2 or) if you want to keep the word list for another time.

See also: WordList Help Contents 156.

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Installation and Updating

4 Installation and Updating

4.1 installing WordSmith Tools

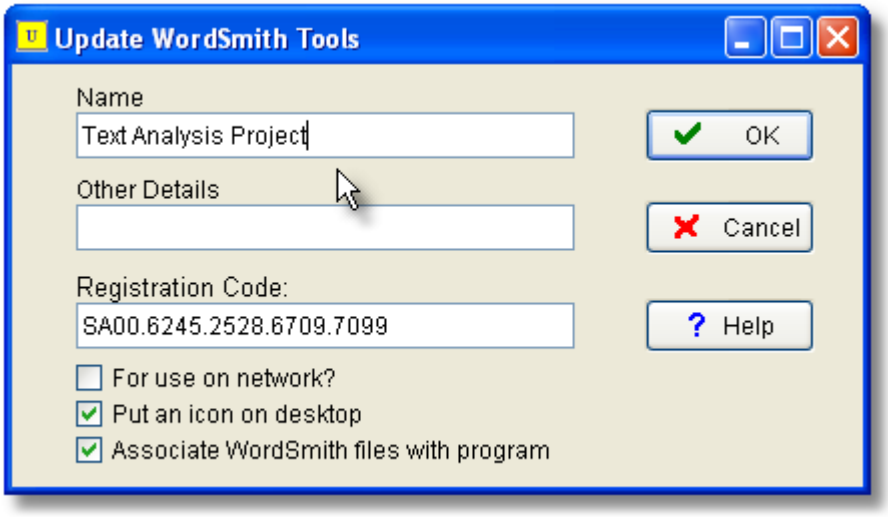
You will need at least 30 Mb of space on your hard disk for the programs.

1. You have run or downloaded and then run one or more .exe files.
2. This will expand all the files needed for WordSmith Tools into the folder of your choice (**c:Program Files\wsmith5** by default). You can install to a removable drive if you wish (explained below).
3. Now run **c:Program Files\wsmith5\wordsmith.exe** to get started. You will be asked to "update from demo". Otherwise WordSmith will go through its paces as a Demonstration Version 270.

Updating

To update your demo version, visit http://www.lexically.net/wordsmith/purchasing.htm for details of suppliers.

Upon receipt of the registration code, run WordSmith Tools. If you have only just installed the updater will start up automatically. If not you can run **c:Program Files\wsmith5\updater.exe**.



Everything must correspond exactly to what you were given when you purchased.

Paste in your Name as specified in your purchase email or screen and (if there are any in the registration) Other Details, and paste in the code.

This name appears in the main window and whenever you access the About menu option (F9). Your software will then be fully enabled, and the Update from Demo menu option will disappear. (The **updater.exe** program will still be there in your Program Files\wsmith5 folder, and can be used if you ever need to re-register.)

For use on network: check this if you are installing on a network drive and plan for users to access it from other PCs connected to the network. This can only be done if your licence permits it (not a

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single user licence).

Put an icon on desktop: check this if you want an icon for WordSmith on your desktop so you can access it easily.

Associate WordSmith files with program: check this if you want your PC to know how to open files created with WordSmith Tools 270. (A **.cnc** file is to be opened using Concord, a .**lst** file with WordList, etc.) You may need Administrator rights to do this.

If you make a mistake and your registration fails, you can try again. If your registration succeeds but you decide to change the "any other details", run **updater.exe**, which you'll find in your **Program Files\wsmith5** folder.

You can get a more recent version at the WordSmith home page.

To un-install, just delete all the files in your **Program Files\wsmith5** folder.

Install to a removable drive

You don't need to install to the **C:** drive -- you can install WordSmith on a USB drive such as a pen drive or memory stick, or a fast external hard drive. That way you can take WordSmith with you from one computer to the next. A pen drive will be a rather slow medium, but a fast external drive can be very satisfactory in terms of speed. If you save your default settings 65, any folder names 271 which are on the external drive itself get the drive letter corrected automatically.

See also: Setting default options 65, Contact Addresses 268, File types 270.

4.2 network defaults

If you have bought a site licence, it's much easier to install one copy of WordSmith on a server which is accessible by all your users. Naturally, you won't want them to save any results or alter the original copy of WordSmith in that main location. So, take a look at **wordsmith.ini**: in it you will see a section which allows you to specify exactly where each user should save their preferences.

The following terms are used

prohibited drives
limited folder
instructions folder
network-read/write folder

and an example would be

[NETWORK]
network-read/write folder=m:Program Files\wsmith5
(drive M: is to be used when running on the network as it's one any user can write to.)
prohibited drives=xyz
(X: Y: and Z: are drives you don't want your users to look in when choosing texts.)
limited folder=v:\texts
(V:\TEXTS -- and any sub-directories of it -- is where users will by default choose their corpus on your network; though they may of course look elsewhere in any other drives they control.)

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instructions folder=L:\English\WSmith instructions
(when you run the software in a teaching session, you will put the instructions in that folder.)

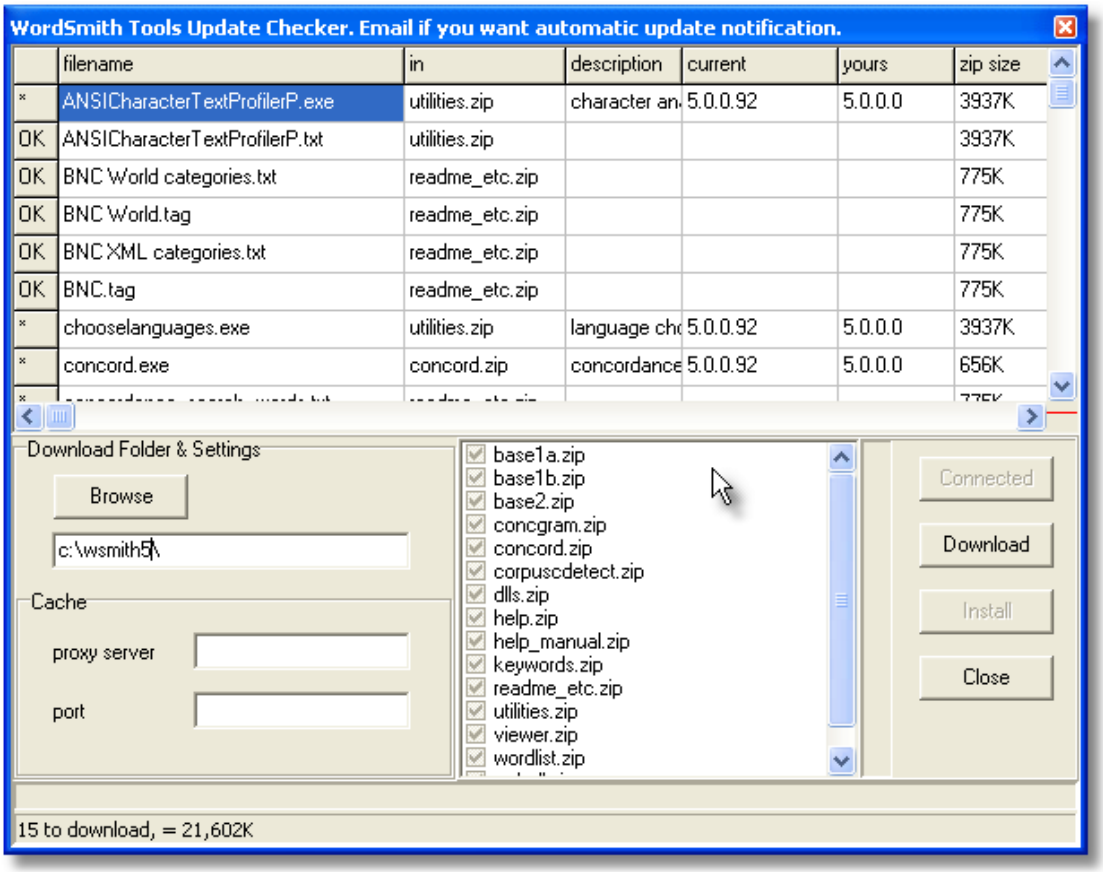
When a new user starts using WordSmith for the very first time, WordSmith will notice that it is running on a network-version and read the "network-read/write folder" information above. It will then try to automatically create the folder you have specified above (in theory you shouldn't need to do it yourself) and copy the various .ini and other settings files over from the folder on your server where the WordSmith program is, to that folder. Your life as a network installer will be a lot easier if the drive and folder you specify is truly one your users can write to!

For network versions, because of a Microsoft security update involving HTML Help files, WordSmith will copy the **wordsmith.chm** file to the user's Windows-allocated temporary folder.

See also: Class Instructions 35

4.3 version checking

WordSmith comes with a file called **wordsmith_version_check.exe** which enables you to check whether your version is current and if not to download the necessary upgrades and patches. In order to install these, WordSmith itself will need to close down.



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See also: version information 288, version updating 8.

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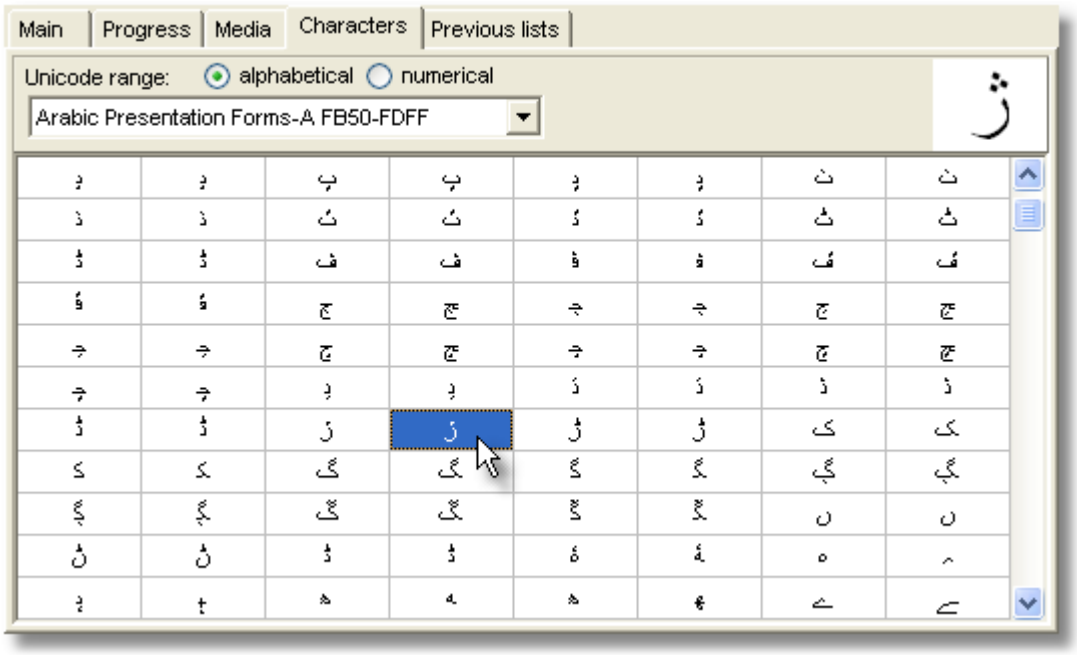
Controller

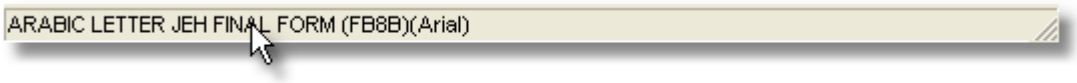
5 Controller

5.1 accents

This window shows the accented characters available for your currently-selected language 30.



and below, the official name of the character selected.



See also: Copying a character into Concord 265

5.2 add notes

This allows you to jot down some notes to save 106 with your data.

For example, if you have done a concordance and sorted it carefully using your own user-defined categories 95, you will probably want to list these and save the information for later use.

If you need access to these notes outside WordSmith Tools, select the text using Shift and the cursor arrows or the mouse, then copy it to the clipboard 265 using Ctrl-Ins and paste into a word processor such as notepad.

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5.3 adjust settings

The main Adjust Settings window in the Controller 4. To get there, choose *Settings* | *Adjust Settings*... in the main Controller window.

Enables you to choose and save 65 settings concerning:

- font 51
- colours 36
- folders 271
- tags 76
- general settings 52
- match-lists 57
- stop lists 70
- lemma lists 165
- text and language settings 72
- Concord Settings 133
- KeyWords settings 153
- WordList settings 191
- advanced user specific settings 23
- index file settings 168

5.4 advanced settings

Customising menus

You can re-assign new shortcuts (such as Alt+F3, Ctrl+O) to the menu items 279 which are used in the various Tools.

And all grids of data have a "popup menu" which appears when you click the right button of your mouse.

To customise this, in the main WordSmith Controller program, choose *Adjust Settings* | *Advanced* | *Menus*.

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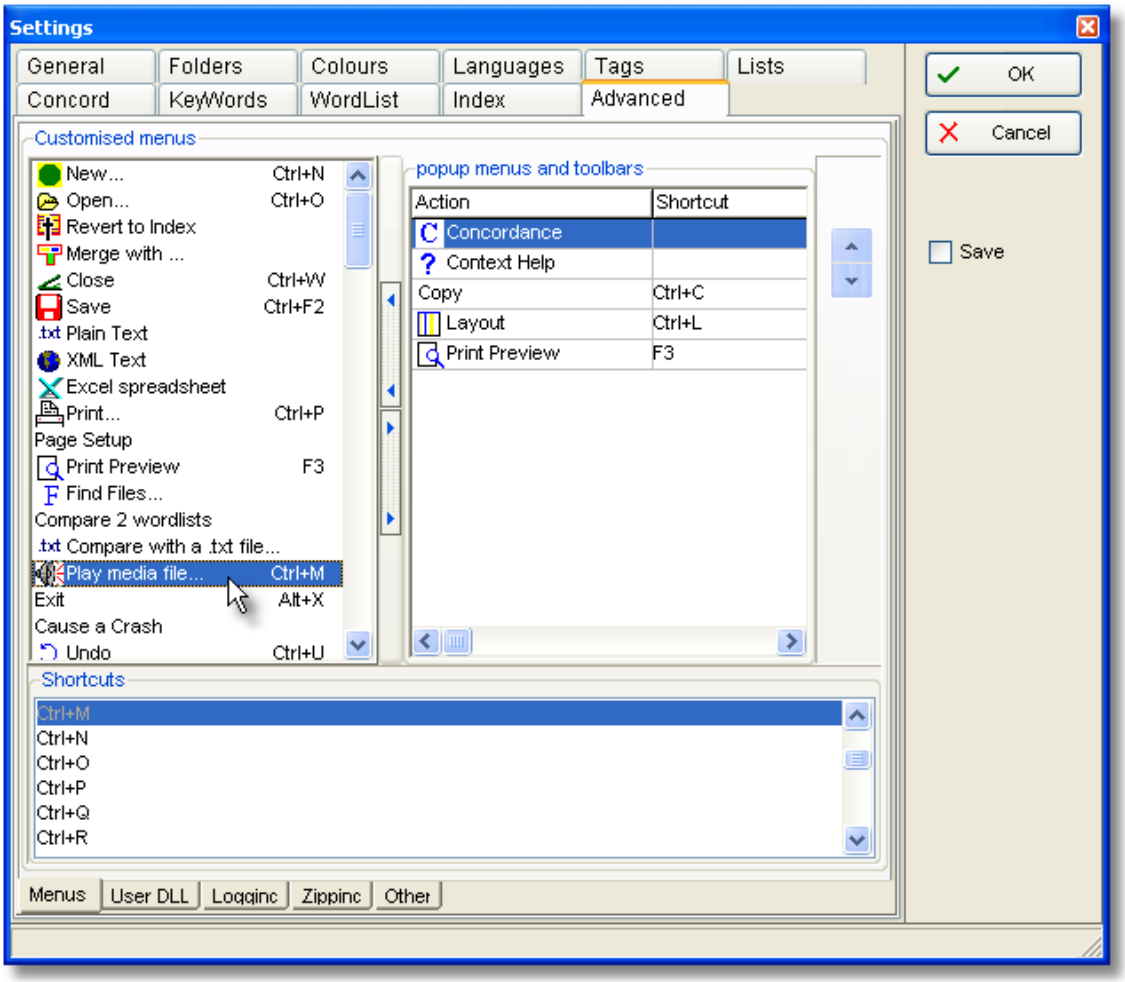

You will see a list of menu options at the left, and can add to (or remove from) the list on the right by selecting one on the left and pressing the buttons in the middle, or by dragging it to the right. To re-order the choices, press the up or down arrow. In the screenshot I've added "Concordance" as I usually want to generate concordances from word-lists and key word lists.

Whatever is in your popup menu will also appear in the Toolbar 52.

Below, you see a list of Shortcuts, with Ctrl+M selected. To change a shortcut, first select the item you want to be affected (Play Media file is selected in the Customised menus list) and then double-click the shortcut, such as Ctrl+Q. Or drag the shortcut up to the Customised menu list.

To save the choices permanently, see Saving Defaults 65.

Logging

Logging is useful if you are getting strange results and wish to see details of how they were obtained. If this is enabled, WordSmith will save some idea of how your results are progressing in the log-file, which you see in the *Adjust Settings* | *Advanced* | *Logging tab* of the Controller.

Here you can optionally switch on or off logging and choose an appropriate file-name. If you switch it on at any time you will get a chance to clear the previous log-file.

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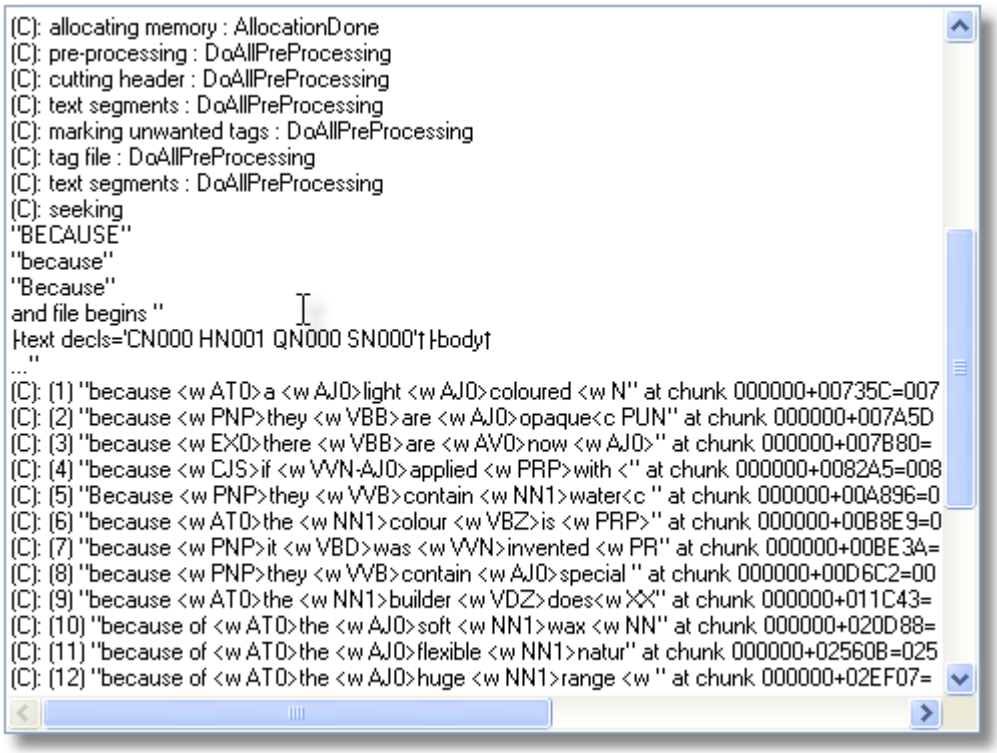


Here we see the current log, of a concordance process. The search was for **BECAUSE, Because** and **because** (a case insensitive search). After some pre-processing of the text file, you can see a record of each of the hits found, its context, and where exactly in the text file it was found. (C) means it was generated by Concord.

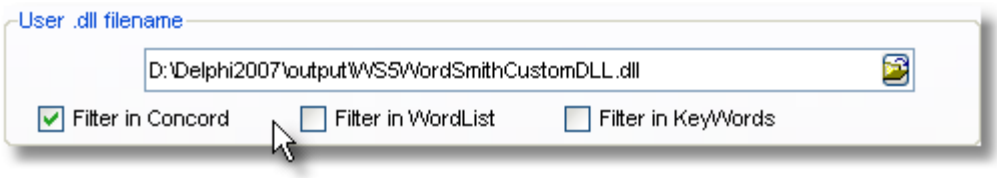
If you want to log as WordSmith starts up, start in from the command line with the parameter **/log**:

Start | Run | Cmd <Enter> **| cdProgram Files\wsmith5** <Enter> **| wordsmith /log** <Enter>

See also: emailed error reports 263.

User .dll

If you have a DLL which you want to use to intercept WordSmith's results, you can choose it here. The one this user is choosing, **WordSmithCustomDLL.dll**, is supplied with your installation and can be used when you wish. If "Filter in Concord" is checked, this .dll will append all concordance lines found in plain text to a file called **Concord_user_dll_concordance_lines.txt** in your **Program Files\wsmith5** folder, if there is space on the hard disk.



Text Conversion

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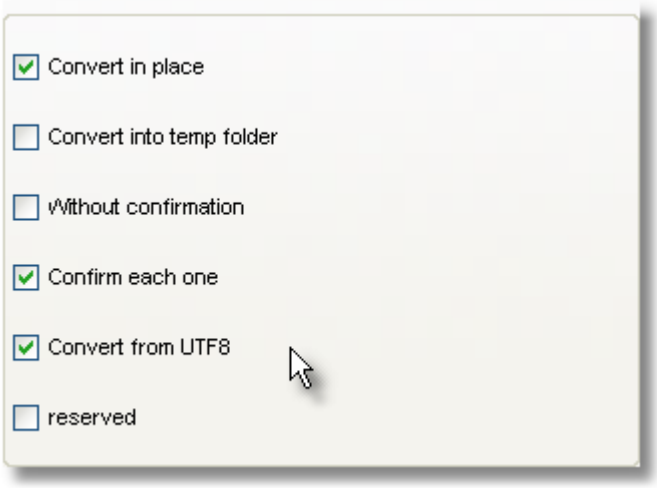
If your text files happen to contain UTF-8 text files, WordSmith will notice and may offer to convert them on the spot using the options below.



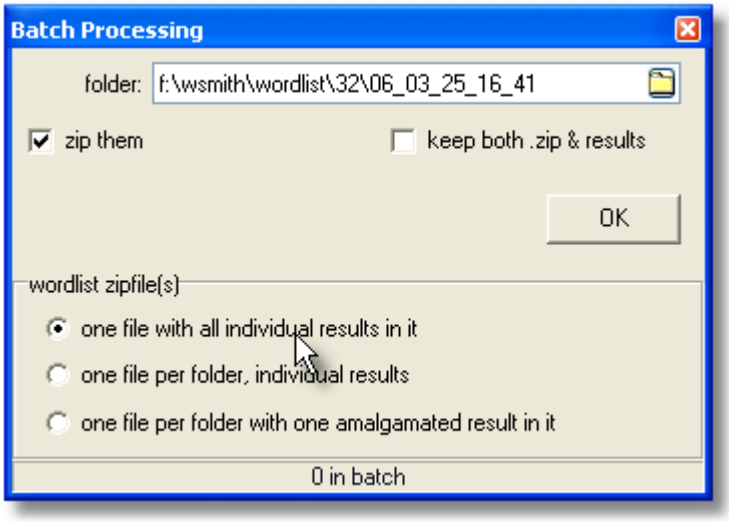
See also : menu and button options 279.

5.5 batch processing

The point of it...

Batch processing is used when you want to make separate lists, but you don't want the trouble of doing it one by one, manually selecting each text file, making the word list or concordance, saving it, and so on.

If you have selected more than one text file you can ask WordList, Concord and KeyWords to process as a batch.



Folder where they end up

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The name suggested is today's date 268. Edit it if you like. Whatever you choose will get created when the batch process starts.

The results will be stored in folders stemming from the folder name. That is, if you start making word lists in

c:\wsmith\wordlist\05_07_19_12_00, they will end up like this:
c:\wsmith\wordlist\05_07_19_12_00\0\fred1.lst
c:\wsmith\wordlist\05_07_19_12_00\0\jim2.lst
..
c:\wsmith\wordlist\05_07_19_12_00\0\mary512.lst
then
c:\wsmith\wordlist\05_07_19_12_00\1\joanna513.lst
etc.

Filenames will be the source text filename with the standard extension **(.lst, .cnc, .kws)**.

Zip them

If checked, the results are physically stored in a standard **.zip** file. You can extract them using your standard zipping tool such as Winzip, or you can let WordSmith do it for you. The files within are exactly the same as the uncompressed versions but save disk space -- and the disk system will also be less unhappy than if there are many hundreds of files in the same folder.

If you zip them, you will get

c:\wsmith\wordlist\05_07_19_12_00\batch.zip

and all the sub-files will get deleted unless you check "keep both .zip and results".

One file / One file per folder?

The first alternative (default) makes one .zip file with all your individual wordlists in it. Each wordlist or concordance or keywords list is for one source text.

But what if your text files are structured like this:

\..\BNC
\..\BNC\written
\..\BNC\written\humanities
\..\BNC\written\medicine
\..\BNC\written\science
\..\BNC\spoken

etc.

The *One file per folder, individual zipfiles* makes a separate .zip of each separate folderful of textfiles (eg. one for humanities, another for medicine, etc.), with one list for each source text.

The *One file per folder, amalgamated zipfiles* makes a separate .zip of each folderful, but makes one wordlist or concordance from that whole folderful of texts.

Batch Processing and Excel

These options may also offer a chance for data to be copied automatically to an Excel file.

Faster (Minimal) Processing

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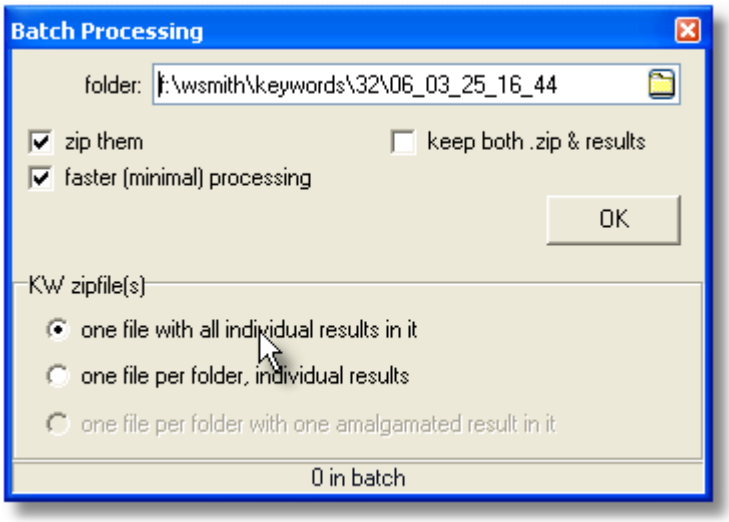

This checkbox is only enabled if you are about to start a process where more than one kind of result can be computed simultaneously. For example, if you are computing a concordance, by default collocates 100, patterns 122 and dispersion plots 104 will be computed when each concordance is done. In KeyWords, likewise, there will be dispersion plots 148, link 147 calculations etc. which will be computed as the KWs are calculated.

If checked, only the minimal computation will be done (KWs in *KeyWords* processing, concordance in *Concord*). This will be faster, and you can always get the plots computed later as long as the source texts 271 don't get moved or deleted.

Example: you're making word lists and have chosen 1,200 text files which are from a magazine called "The Elephant".

You specify

`C:\WSMITH\WORDLIST\ELEPHANT` as your folder name.

If you already have a folder called `C:\WSMITH\WORDLIST\ELEPHANT`, you will be asked for permission to erase it and all sub-folders of it!

After you press OK,

1,200 new word-lists are created, called `trunk.LST, tail.LST .. digestive system.LST`. They are all in numbered sub-folders of a folder called

`C:\WSMITH\WORDLIST\ELEPHANT`.

If you did not check "zip them into 1 .zip file", you will find them under `C:\WSMITH\WORDLIST\ELEPHANT\0`.

If you did check "zip them into 1 .zip file", there is now a `C:\WSMITH\WORDLIST\ELEPHANT.ZIP` file which contains all your results. (The 1,200 `.LST` files created will have been erased but the `.ZIP` file contains all your lists.)

The advantage of a `.zip` file is that it takes up much less disk space and is easy to email to others. WordSmith can access the results from within a `.zip` file, letting you choose which word list, concordance etc. you want to see.

Getting at the results in WordSmith

Choose File | Open as usual, then change the file-type to "Batch file *.zip". When you choose a .zip file, you will see a window listing its contents. Double-click on any one to open it.

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Note: of course Concord will only succeed in opening a concordance and KeyWords a key word list file. If you choose a .zip file which contains something else, it will give an error message.

5.6 choose favourite texts

save favourites

Used to save your current selection of texts. Useful if it's complex, e.g. involving several different folders.

Saves a list of text files whose status is either unknown or known to meet your requirements when selecting files by their contents 79, ignoring any which do not.

get favourites

Used to read a previously-saved selection from disk.

By default the filename 279 will be the name of the tool you're choosing texts for plus **`recent_chosen_text_files.dat`**, in your main WordSmith folder.

You may use a plain text file for loading ( ) a set of choices you have edited using Notepad, but note that each file needed must be fully specified: wildcards are not used and a full drive:\folder path is needed.

See also: Choosing Texts 31

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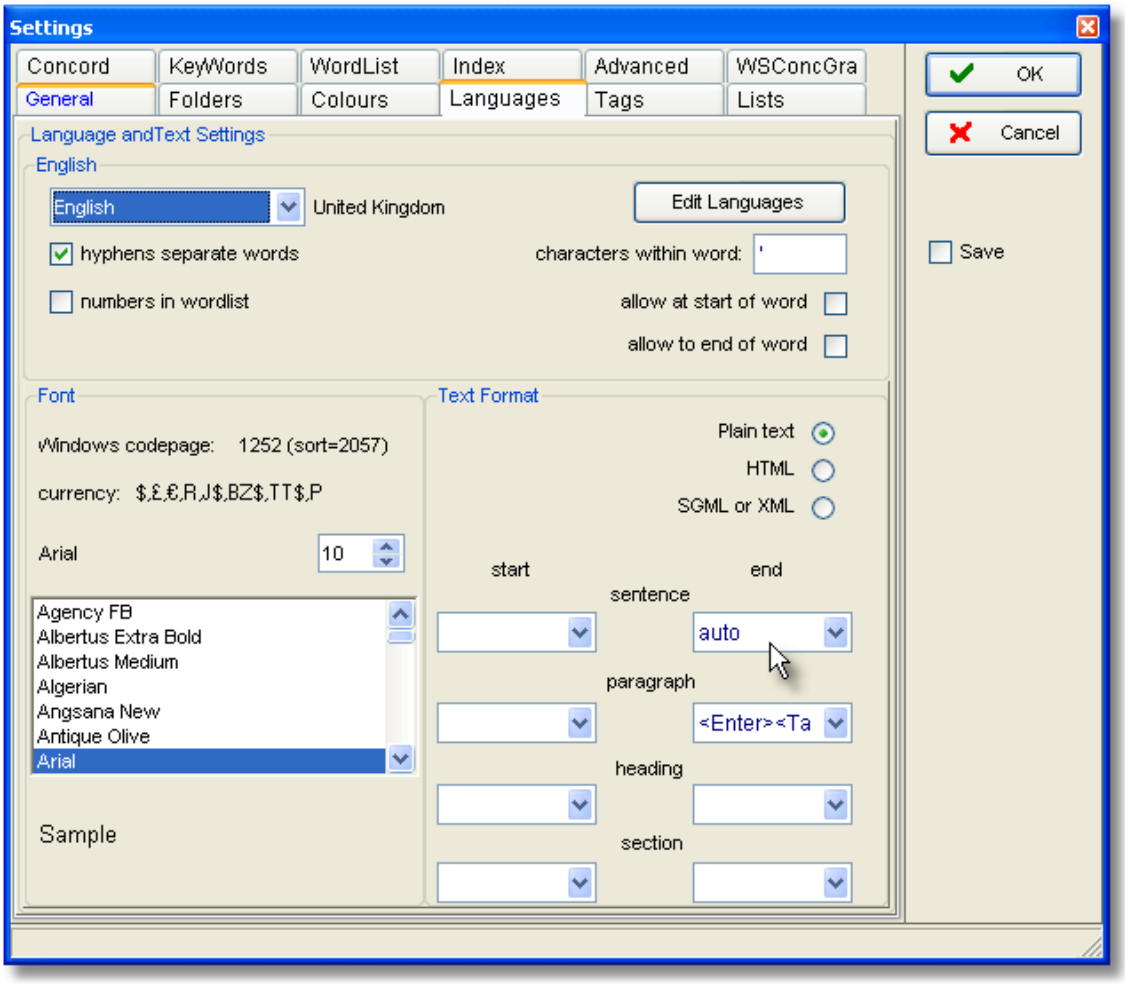
5.7 choose language



Choose the language for the text you're analysing in the Controller 4 under *Adjust Settings* | *Languages*. The language and character set 264 must be compatible, e.g. English is compatible with Windows Western (1252), DOS Multilingual (850).

WordSmith Tools handles a good range of languages, ranging from Albanian to Zulu. Chinese, Japanese, Arabic etc. are handled in Unicode. You can view word lists, concordances, etc. in different languages at the same time.

Font 51

Text Format 72

The point of it…

Languages vary considerably in their preferences regarding sorting order. Spanish, for example, uses this order: A,B,C,CH,D,E,F,G,H,I,J,K,L,LL,M,N,Ñ,O,P,Q,R,S,T,U,V,W,X,Y,Z. And accented characters are by default treated as equivalent to their unaccented counterparts in some languages (so, in French we get `donne, donné, données, donner, donnez`, etc.) but in other

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languages accented characters are not considered to be related to the unaccented form in this way (in Czech we get `cesta .. cas .. hre .. chodník` ..)

Sorting is handled using Microsoft routines. If you process texts in a language which Microsoft haven't got right, you should still see wordlists in a consistent order.

Note that case-sensitive means that `Mother` will come after `mother` (not before `apple` or after `zebra`).

It is important to understand that a comparison of two wordlists (e.g. in KeyWords) relies on sort order to get satisfactory results -- you will get strange results in this if you are comparing 2 wordlists which have been declared to be in different languages.

How more languages are added

Press the *Edit Languages* button.

See also: Choosing Accents & Symbols 265, Accented characters 264, Processing text in Chinese etc., Text Format 86

5.8 choose texts

Type of text files

In WordSmith you need plain text files 264, such as you get if you save a Word **`.doc`** as Plain Text (**`.txt`**). Any Word **`.doc`** files will look crossed out and should not be used. Don't choose **`.pdf`**s either, they have a very special format.

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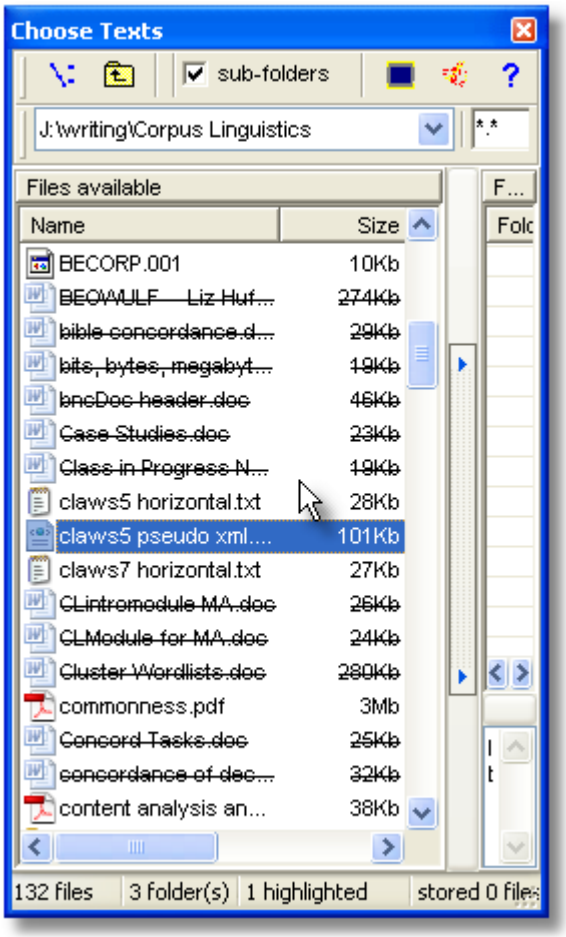

How to get here

This function is accessed from the File menu in the Controller and the Settings menu or New menu item ( ) in the various Tools.

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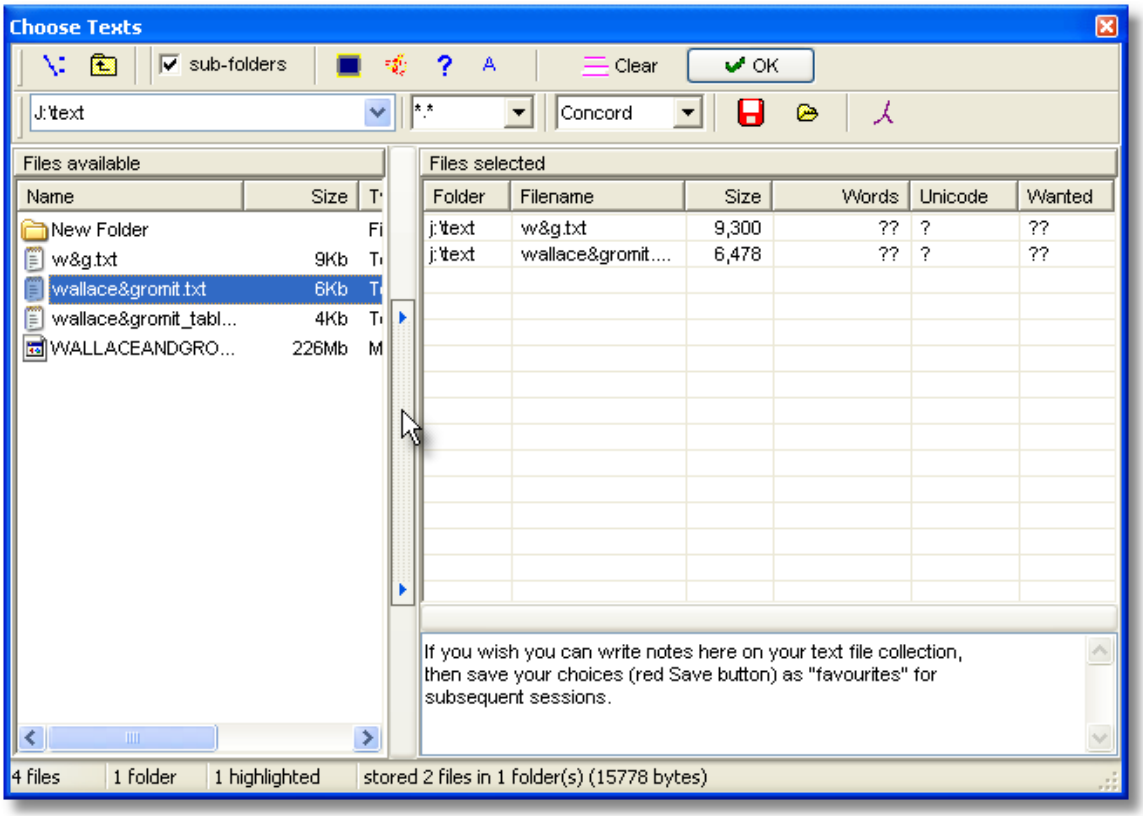

The two main areas at left and right are

- files to choose from (at left)
- files already selected (at right)

The button with blue arrows is what you press to move any you have selected at the left to your "files selected" at the right. Or just drag them from the left to the right.

The list on the right shows full file details (name, date, size, number of words (above shown with ?? as WordSmith doesn't yet know, though it will after you have concordanced or made a word list) and whether the text is in Unicode (? for the same reason). To the right of Unicode is a column stating whether each text file meets your requirements 79.

The buttons at the top left let you see the files available as icons, as a list, or with full details (the default) instead.

If you have never used WordSmith before (more precisely if you have not yet saved any concordances, word lists etc.) you will find that a chapter from Charles Dickens' Tale of 2 Cities has been selected for you. To stop this happening, make sure that you do save at least one word list or concordance! See also -- previous lists 60.

File Types

The default file specification is *.* (i.e. any file) but this can be altered in the window above the big blue arrow or set permanently in wordsmith.ini 65.

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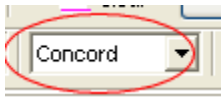
Tool

In the screenshot above you can see 

-- we are choosing texts for Concord. There are alternatives available (WordList, KeyWords etc.).

Sorting

By clicking on Name, Size, Type, Words, Unicode or Modified you can re-sort the listing. The red and yellow button ( ) re-orders the files (on both sides) in random order.

Select All

Selects all the files in the current folder.

Drives and Folders

Double-click on a folder to enter it. You can re-visit a folder if its name is in the folder window history list, and easily go back with the standard Windows "back" button . Or click on the button to choose a new drive or folder.

Sub-Folders

If checked, when you select a whole driveful or a whole folderful of texts at the left, you will select it plus any files in any sub-folders of that drive or folder.

Test for Unicode

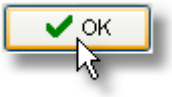
This button tests any files selected. In the screenshot above, no tests have been done so the display shows ? for each file. If the text file is in Unicode, the display shows *U*, if Unicode big-endian it'll show *UB*, if plain ASCII or Ansi text it will show *A*, if it's a Word .doc file, *D*. If it is in UTF-8, *8*.

Clear

As its name suggests, this allows you to change your mind and start afresh. If any selected filenames are highlighted, only these will be cleared.

Favourites

Two buttons on the right (and) allow you to save or get a previous file selection 29, saving you the trouble of making and remembering a complex set of choices.



This puts the current file selection into store. All files of the type you've specified in any sub-folders will also get selected if the "Sub-folders too" checkbox is checked. You can check on which ones have been selected under All Current Settings.

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Advanced

Opens a toolbar showing some further buttons:

View

Allows you to browse within the currently selected file so as to check whether to include it. Any accented characters (e.g. æ, é) or currency symbols such as £, ¥, ¢, and tags 76 will appear according to current Text Characteristics settings 72. You can change these while viewing 256 the file.

View in Notepad

Lets you see the text contents in the standard Windows simple word-processor for text files, Notepad.

Get from Internet

Allows you to access WebGetter 10 so as to download text from the Internet.

Zip files

If you double-click on a zip file 289 you can enter that as if it were a folder and see the contents. You can view these too.

See also : Step-by-step online example, Finding source texts 271.

5.9 choosing files from standard dialogue box

The dialogue box here is very similar to the one used for choosing text files 31; it also allows you to choose from a zip file 289.

You can use Viewer & Aligner 248 to examine a file: this makes no sense in the case of a word list, key word list, or concordance, but may be useful if you need to examine a related text file, e.g. a readme.txt in the same zip file as your concordance or word lists.

To choose more than one file, hold the Control key down as you click with your mouse, to select as many separate files as you want. Or hold down the Shift key to select a whole range of them.

5.10 class or session instructions

When WordSmith is run in a training session, you may want to make certain instructions available to your trainees.

To do this, all you need to do is ensure there is a file called **`teacher.rtf`** in your main **`Program Files\wsmith5`** folder where the WordSmith programs are or in the "instructions folder" explained under Network Defaults 18. If one is found, it will be shown automatically when WordSmith starts up. To stop it being shown, just rename it! You edit the file using any Rich Text Format word processor, such as MS Word™, saving as an **`.rtf`** file.

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See also: Network defaults 18

5.11 colours

Found in main Settings menu in all Tools and Adjust Settings in the Controller 4. Enables you to choose your default colours for all the Tools. Available colours can be set for

plain text	this is the default colour
highlighted text	as above when selected
tags 112	mark-up
search word 129	concordance search word; words in (key) word lists
main sort word 186	indicates first sort preference; used for % data in (key) word lists
second sort word	indicates first tie-breaker sort colour
context word	context word
deleted words	any line of deleted data
not numbered line	any line which has not been user-sorted
search word highlighted	concordance search word when selected
main sort word highlighted	first sort when selected
second sort word highlighted	first tie-breaker sort when selected
context word highlighted	context word when selected
most frequent collocate	most frequent collocate or detailed consistency word, p value 148 in keywords
viewing texts	in the text viewer 9

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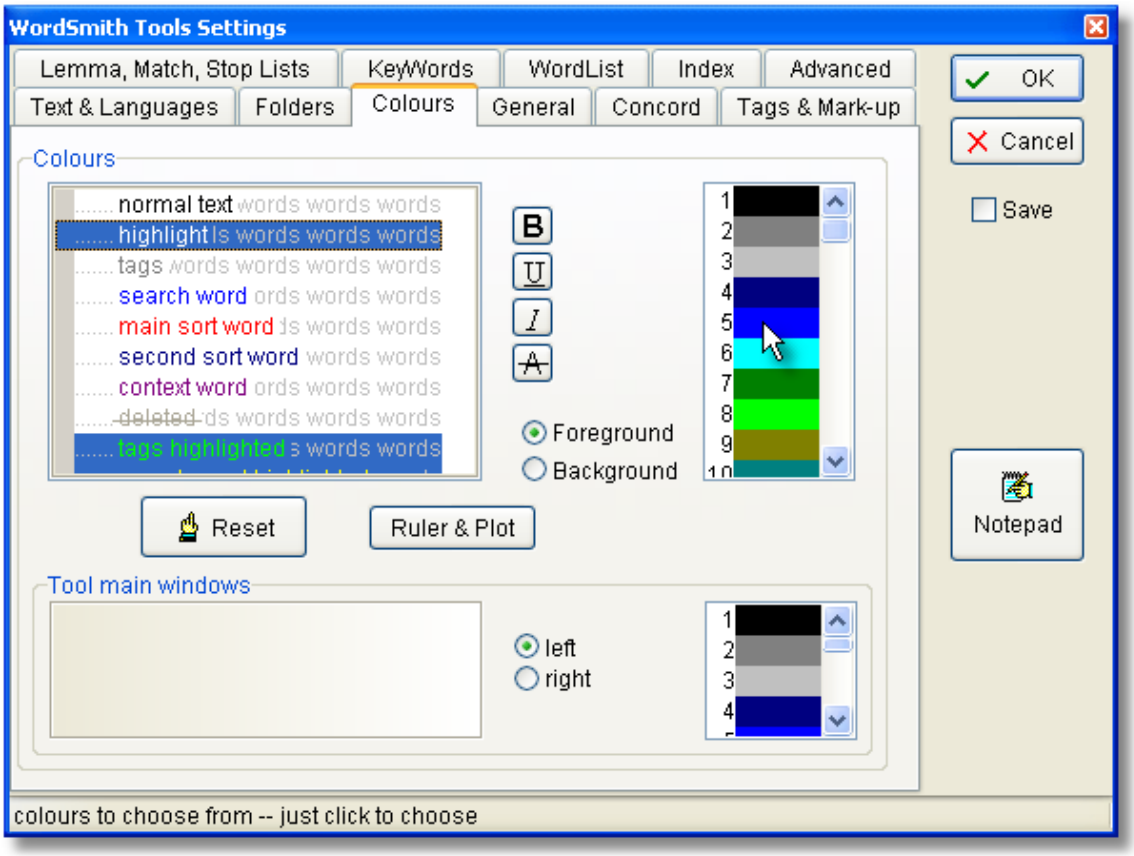

To alter colours, first click on the wording you wish to change (you'll see a difference in the left margin: here highlight has been chosen), then click on a colour in the colour box (where the cursor is in the screenshot). The radio buttons below the colours determine whether you're changing foreground or background colours. You can press the Reset button if you want to revert to standard defaults.

The same colours, or equivalent shades of grey, will appear in printouts, or you can set the printer 52 to black and white, in which case any column not using "plain text" colour will appear in italics (or bold or underlined if you have already set the column to italics).

Ruler and Plot

This opens another dialogue window, in which you can set colours and plot divisions for the ruler:

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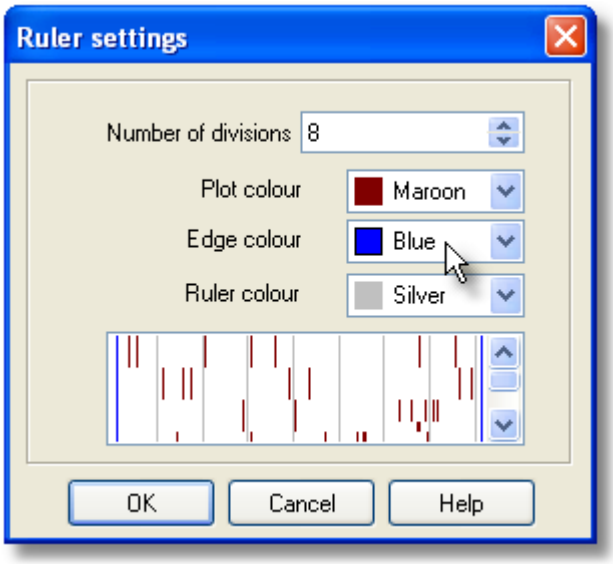


See also: layout 54 for changing the individual colours of each column of data.

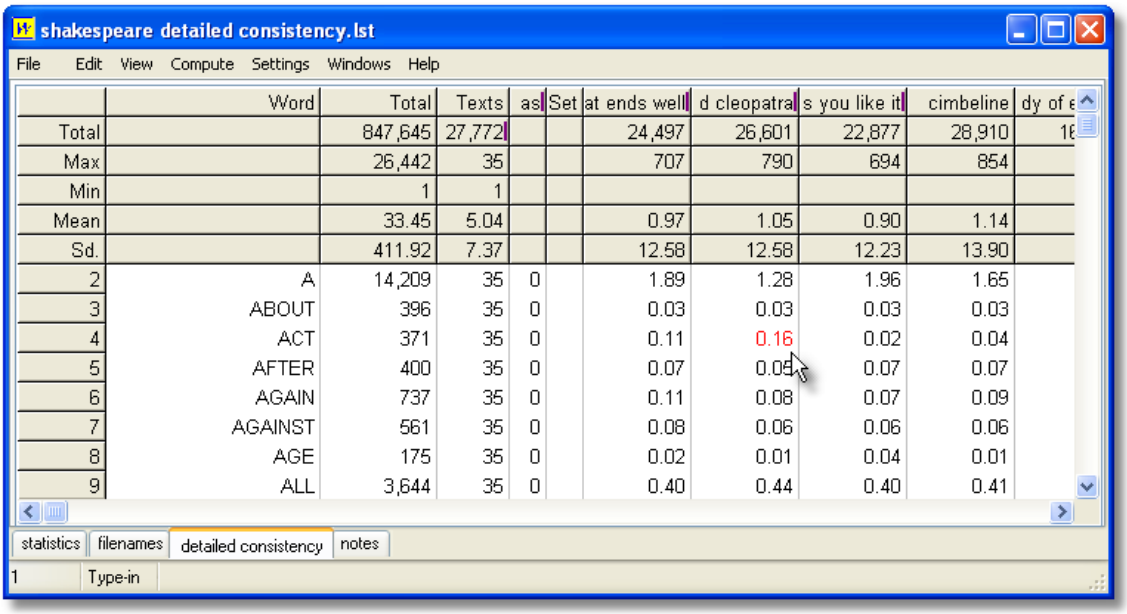
5.12 column totals

The point of it...

This function allows you to see a total and basic statistics on each column of data, if the data are numerical.

How to do it

With a word-list, concordance or key-words list visible, choose the menu item *View* | *Column Totals* to switch column totals on or off.



	Word	Total	Texts	as	Set	at ends well	d cleopatra	s you like it	cimbeline	dy of e
Total		847,645	27,772			24,497	26,601	22,877	28,910	1
Max		26,442	35			707	790	694	854	
Min		1	1							
Mean		33.45	5.04			0.97	1.05	0.90	1.14	
Sd.		411.92	7.37			12.58	12.58	12.23	13.90	
2	A	14,209	35	0		1.89	1.28	1.96	1.65	
3	ABOUT	396	35	0		0.03	0.03	0.03	0.03	
4	ACT	371	35	0		0.11	0.16	0.02	0.04	
5	AFTER	400	35	0		0.07	0.05	0.07	0.07	
6	AGAIN	737	35	0		0.11	0.08	0.07	0.09	
7	AGAINST	561	35	0		0.08	0.06	0.06	0.06	
8	AGE	175	35	0		0.02	0.01	0.04	0.01	
9	ALL	3,644	35	0		0.40	0.44	0.40	0.41	

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Here we see column totals on a detailed consistency list based on Shakespeare's plays. The list itself is sorted by the Texts column: the top items are found in all 35 of the plays used for the list. In the case of Anthony and Cleopatra, *A* represents 1.28% of the words in that column, that is 1.28% of the words of the play Anthony and Cleopatra. In the case of *ACT* this is the highest percentage in its row (this word is used more in percentage terms in that play than in the others).

5.13 compute new column of data

The point of it…

This function brings up a calculator, where you can choose functions to calculate values which interest you. For example, a word list routinely provides the frequency of each type, and that frequency as a percentage of the overall text tokens. You might want to insert a further column showing the frequency as a percentage of the number of word types, or a column showing the frequency as a percentage of the number of text files from which the word list was created.

How to do it

Just press *Compute* | *New Column* and create your own formula. You'll see standard calculator buttons with the numbers 0 to 9, decimal point, brackets, 4 basic functions. To the right there's a list of standard mathematical functions to use (pi, square root etc.): to access these, double-click on them. Below that you will see access to your own data in the current list, listing any number-based column-headings. You can drag or double-click them too.

Absolute and Relative

Your own data can be accessed in two ways. A relative access (the default) means that as in a spreadsheet you want the new column to access data from another column but in the same row. Absolute access means accessing a fixed column and row.

Examples

you type	Result -- for each row in your data, the new column will contain:
Rel(2) ÷ 5	the data from column 2 of the same row, divided by 5
RelC(2)	the data from column 2 of the same row, added to a running total
Rel(3) + (Rel(2) ÷ 5)	the data from column 2 of the same row, divided by 5, added to the data from column 3 of the same row
Abs(2;1) ÷ 5	the data from column 2 of row 1, divided by 5. (This example is just to illustrate; it would be silly as it would give the exact same result in every row.)
Rel(2) ÷ Abs(2;1) × 100	the data from column 2 of the same row divided by column 2 of row 1 and multiplied by 100. This would give column 3 as a percentage of the top result in column 2. For the first row it'd give 100%, but as the frequencies declined so would their percentage of the most frequent item.

You can format (or even delete) any variables computed in this way: see layout 54.

See also: count data frequencies 40, column totals 38

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5.14 copy your results

The quickest and easiest method of copying your data e.g. into your word processor is to select with the cursor arrows and then press Ctrl+Ins or Ctrl+C. This puts it into the clipboard 265 (click to see examples showing how to copy into Word etc.).

If you choose File | Save As you get various choices:

saving as a text file or XML or spreadsheet 61
save 66 as data (not the same as saving as text: this is saving so you can access your data again another day)

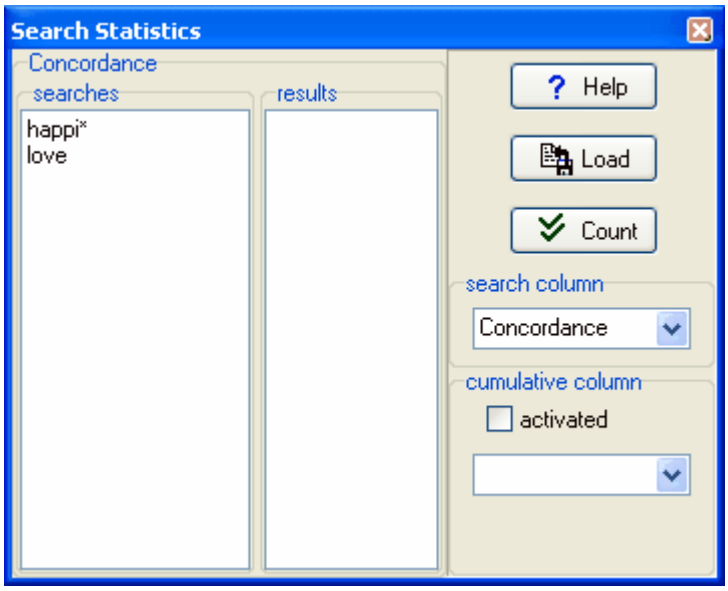
See also: saving 66, printing 60, clipboard 265

5.15 count data frequencies

You may want to know how many of your concordance lines contain "**happi***" or how many items in a word-list end in ***ly**. To do this, choose *Summary Statistics* in the *Compute* menu.

Example

You have a concordance already computed. Select anywhere in the concordance lines and choose *Compute : Summary Statistics*. Type **happi*** and **love** in the searches window.



Press Count -- you should see something like this:

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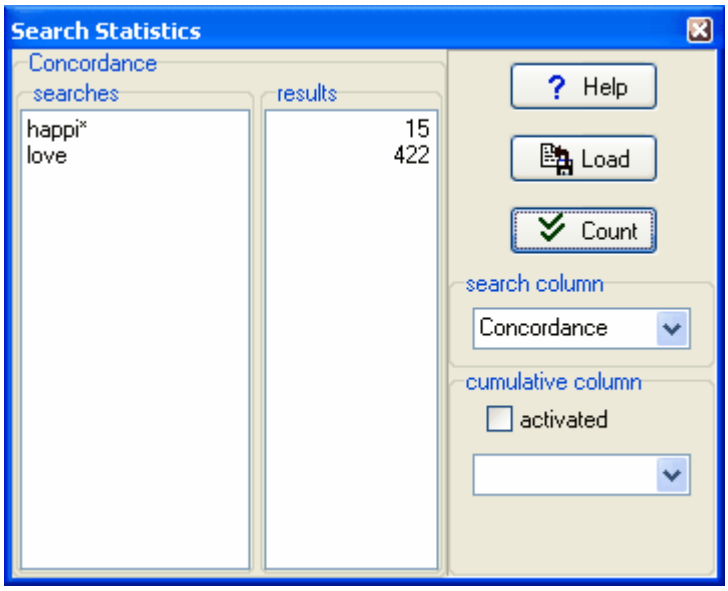

The procedure has processed all your concordance lines and found out that 15 contain **happi*** and 422 contain the whole word **love** (not **loved, loves**).

Search Column

This combobox lets you choose which column of data to count in.

Cumulative Column

A cumulative count adds up scores on another column of data apart from the one you are processing for your search. The columns in this combobox are of the numerical data only. Select one and ensure *activated* is ticked.

In this example, a word-list was computed and a search was made of words beginning with **W** or **T**. There are 208 of those beginning with **W**. In brackets you can see 1715 -- this means that the cumulative count of words beginning with **W** in terms of their frequency (*Freq.*column) is 1715, in other words an average frequency of about 8 (1715 / 208). But for the words beginning in **T**, although the absolute number is similar (239), the average cumulative frequency is about 15. That is because there are lots of high-frequency words beginning in **T** in English.

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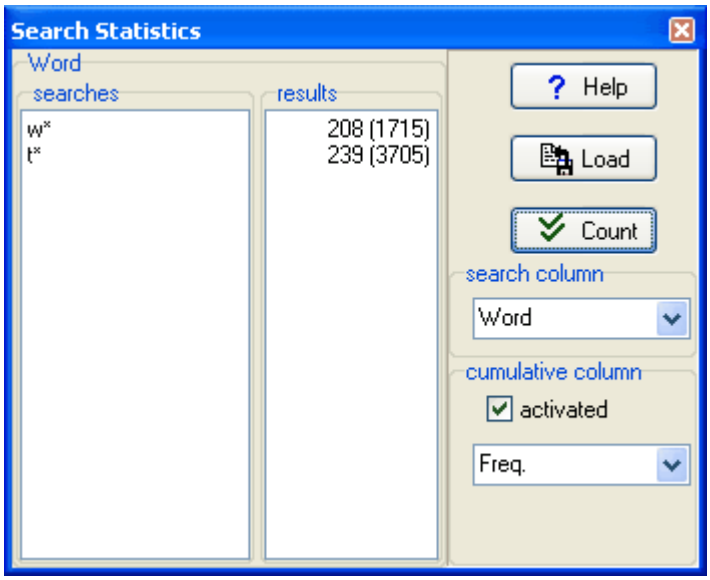

Load

This allows you to load into the searches window any plain text file which you have prepared previously.

See also: compute new column of data 39.

5.16 custom processing

This feature -- which, like API 262, is not for those without a tame programmer to help -- is found under *Adjust Settings* | *Advanced*.

The point of it…

I cannot know which criteria you have in processing your texts, other than the criteria already set up (the choice of texts, of search-word, etc.) You might need to do some specialised checks or alteration of data before it enters the **WordSmith** formats. For example, you might need to lemmatise a word according to the special requirements of your language.

This function makes that possible. If for example you have chosen to filter concordances, as **Concord** processes your text files, every time it finds a match for your search-word, it will call your **`.dll`** file. It'll tell your own **`.dll`** what it has found, and give it a chance to alter the result or tell **Concord** to ignore this one.

How to do it…

Choose your **`.dll`** file (it can have any filename you've chosen for it) and check one or more of the options in the Advanced page. You will need to call standard functions and need to know their names and formats. It is up to you to write your own .dll program which can do the job you want. This can be written in any programming language (C++, Java, Pascal, etc.).

An example for lemmatising a word in WordList

The following DLL is supplied with your installation, compiled & ready to run.

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Your .dll needs to contain a function with the following specifications

```
function WordlistChangeWord(
  original : pointer;
  language_identifier : DWORD;
  is_Unicode : WordBool) : pointer; stdcall;
```

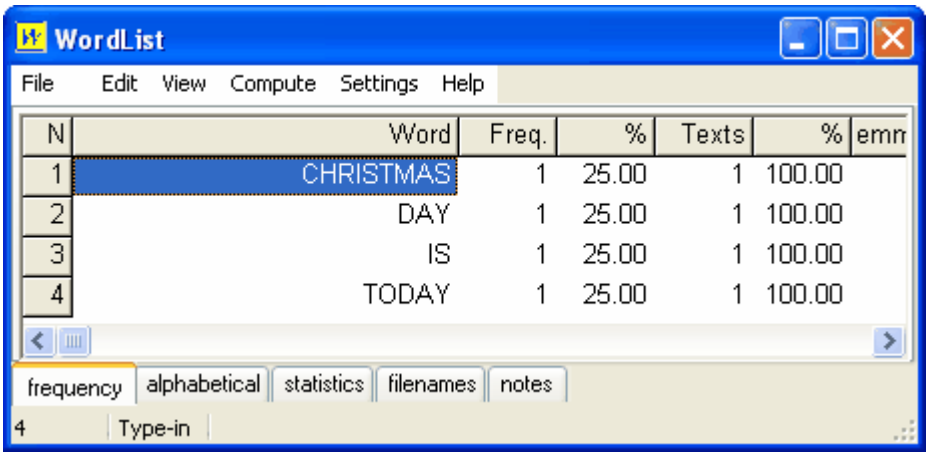
The language_identifier is a number corresponding to the language you're working with. See List of Locale ID (LCID) Values as Assigned by Microsoft .

So the "original" (sent by WordSmith) can be a PCHAR (7 or 8-bit) or a PWIDECHAR (16-bit Unicode) and the result which your .dll supplies can point to

a) nil (if you simply do not want the original word in your list)
b) the same PCHAR/PWIDECHAR if it is not to be changed at all
c) a replacement form

Here's an example where the source text was

Today is Easter Day.



The source code for the .dll in Delphi is this

```
**********************************
library WordSmithCustomDLL;

uses
  Windows, SysUtils;

{
 This example uses a very straightforward Windows routine for comparing
 strings, CompareStringA and CompareStringW which are in a Windows .
dll.

 The function does a case-insensitive comparison because
 NORM_IGNORECASE (=1) is used. If it was replaced by 0, the comparison
 would be case-sensitive.
```

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```
 In this example, EASTER gets changed to CHRISTMAS.
}

function WordlistChangeWord(
  original : pointer;
  language_identifier : DWORD;
  is_Unicode : WordBool) : pointer; stdcall;
begin
  Result := original;
  if is_Unicode then begin
    if CompareStringW(
      language_identifier,
      NORM_IGNORECASE,
      PWideChar(original), -1,
      PWideChar(widestring('EASTER')), -1) - 2 = 0
    then
      Result := pwidechar(widestring('CHRISTMAS'));
  end else begin
    if CompareStringA(
      language_identifier,
      NORM_IGNORECASE,
      PChar(original), -1,
      PChar('EASTER'), -1) - 2 = 0
    then
      Result := pchar('CHRISTMAS');
  end;
end;

function ConcordChangeWord(
  original : pointer;
  language_identifier : DWORD;
  is_Unicode : WordBool) : pointer; stdcall;
begin
  Result := WordlistChangeWord(original,language_identifier,
is_unicode);
end;

function KeyWordsChangeWord(
  original : pointer;
  language_identifier : DWORD;
  is_Unicode : WordBool) : pointer; stdcall;
begin
  Result := WordlistChangeWord(original,language_identifier,
is_unicode);
end;

function HandleConcordanceLine
 (source_line : pointer;
  hit_position,
  hit_length : word;
  byte_position_in_file,
  language_id : DWORD;
  is_Unicode : WordBool;
  filename : pchar) : pointer; stdcall;

  function extrasA : string;
  begin
    Result := #9+pchar(filename)+
              #9+ IntToStr(byte_position_in_file)+
              #9+ IntToStr(hit_position)+
```

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```
                #9+ IntToStr(hit_length);
  end;

  function extrasW : widestring;
  begin
    Result := extrasA;
  end;

var f : TextFile;

  output_file : string;
begin
  Result := source_line;
  output_file := ChangeFileExt(ParamStr(0),'')+
    '_user_dll_concordance_lines.txt';
  if (not IsPathDelimiter(ExpandUNCFileName(ParamStr(0)),1)) and
     (DiskFree(Ord(UpCase(output_file[1]))-64) > 1024*2000) then
  try
    if FileExists(output_file) then begin
      AssignFile(f,output_file);
      Append(f);
    end else begin
      AssignFile(f,output_file);
      Rewrite(f);
    end;
    if is_Unicode then
      Writeln(f,pwidechar(source_line)+extrasW)
    else
      Writeln(f,pchar(source_line)+extrasA);
    Flush(f);
    CloseFile(f);
  except
  end;
end;

exports

  ConcordChangeWord,
  KeyWordsChangeWord,
  WordlistChangeWord,
  HandleConcordanceLine;

begin
end.
```

See also : API 262, custom settings 45

5.17 custom settings

Custom Tagsets

In the main *Settings* | *Tags* window, you will see this, but you won't find "Shakespeare" as one of the options.

The point of it...

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The point of this choice is to change a whole series of settings according to the type of corpus you wish to process.

When you change the setting above, any valid data as explained below will get loaded into your defaults.

How to do it

1. Create a plain text file called "**custom_tag_settings.txt**" and save it in your **Program Files\wsmith5** folder. The format is like this:

- Each entry starts **<n>** and ands **</n>**, where n is a number up to 20.
- An entry must contain a label and may contain any of the other markers specified below:
  <label> </label>
  <default> </default> (this can be used for one entry only and will determine which label is selected)
  <entity_file> </entity_file>
  <tag_file> </tag_file>
  <tags_exclude_file> </tags_exclude_file>
  <ignore_string> </ignore_string>
  <header_string> </header_string>
  <sentence_begin> </sentence_begin>
  <sentence_end> </sentence_end>
  <paragraph_begin> </paragraph_begin>
  <paragraph_end> </paragraph_end>
  <heading_begin> </heading_begin>
  <heading_end> </heading_end>
  <section_begin> </section_begin>
  <section_end> </section_end>
- All of these will have leading and trailing spaces removed.
- Use **auto** for automatic processing eg. of sentence ends.

Example

I wanted a choice of Shakespeare to determine which tags were chosen and how sentences, paragraphs etc. would be recognised in my Shakespeare corpus.

Here is how I made "Shakespeare":

```
<1>
<label> Shakespeare </label>
<entity_file> sgmltrns.tag</entity_file>
<tag_file> Shakespeare.tag</tag_file>
<tags_exclude_file> Shakespeare exclusion tags.tag</tags_exclude_file>
<ignore_string> <*> </ignore_string>
<header_string> </Header></header_string>
<sentence_begin> </sentence_begin>
<sentence_end>auto</sentence_end>
<paragraph_begin> </paragraph_begin>
```

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<paragraph_end> </paragraph_end>
<heading_begin> </heading_begin>
<heading_end> </heading_end>
<section_begin> </section_begin>
<section_end> </section_end>
</1>

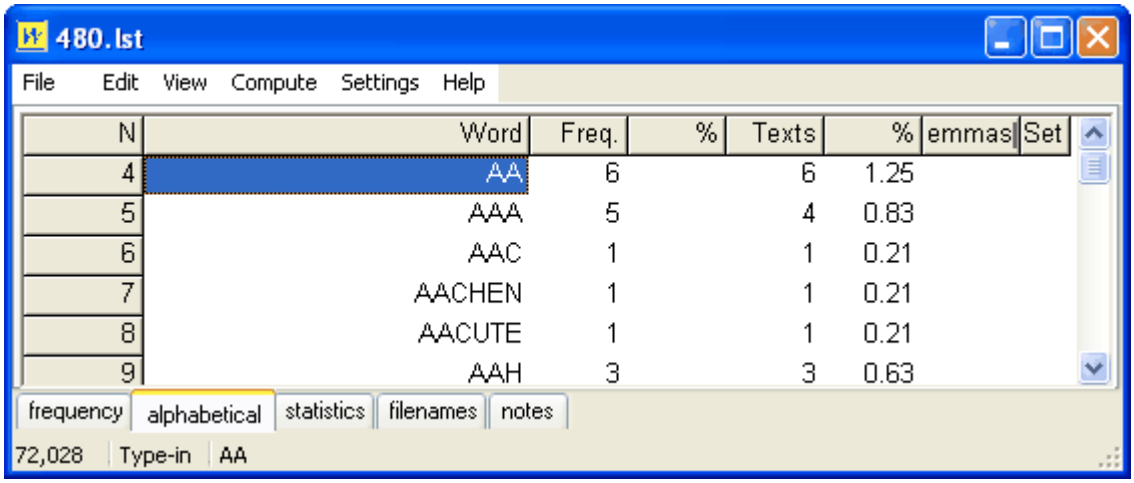
There were <2>...</2>, <3> ... </3> etc. but they aren't supplied here.

There was no point in trying to recognise paragraph breaks in Shakespeare plays, but I did want an idea of sentences, to be recognised simply by full stops etc.

See also : Tags as text selectors 77

5.18 editing a list of data

With a word list on screen, you might see something like this.



In the status bar at the bottom,

the number in the first cell is the number of words in the current word list and **AA** in the third cell is the word selected.

At the moment, when the user types anything, WordList will try to find what is typed in the list.

If you right-click the second cell you will see

and can change the options for this list to *Set* (to classify your words, eg. as adjectives v. nouns) or *Edit*, to alter them. Note that some of the data is calculated using other data and therefore

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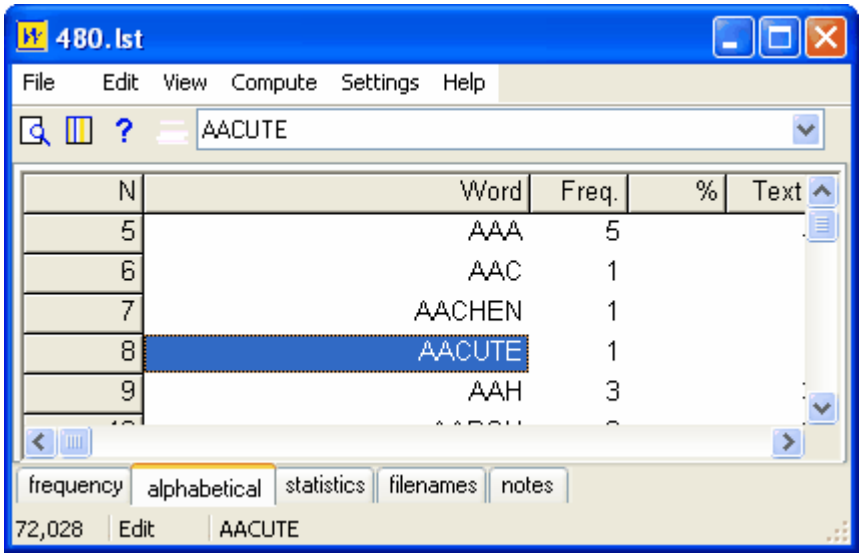
cannot be edited. For example, frequency percentage data is based on a word's frequency and the total number of running words. You can edit the word frequency but not the word frequency percentage.

Choose *Edit.*

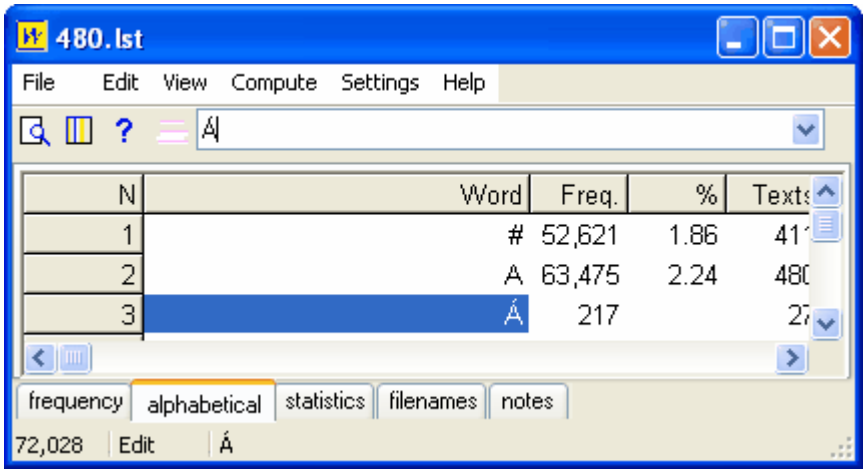
Now, in the column which you want to edit, press any letter.

This will show the toolbar (if it wasn't visible before) so you can alter the form of the word or its frequency. If you spell the word so that it matches another existing word in the list, the list will be altered to reflect your changes.

In this case we want to correct **AACUTE**, which should be **Á**.



If you now type **Á**, you will immediately see the result in the window:



Clicking the downward arrow at the right of the edit combobox, you will see that the original word is there just in case you decide to retain it.

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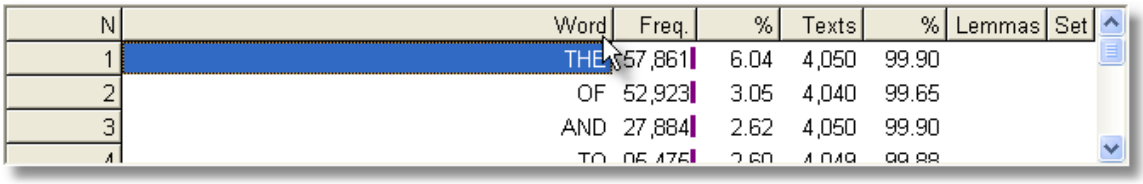
After editing you may want to re-sort 279 (), and if you have changed a word such as **AAAAAGH** to a pre-existing word such as **AAGH**, to join 165 the two entries.

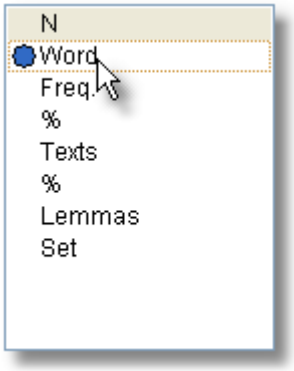
See also: joining entries 165, finding source files 271.

5.19 editing column headings

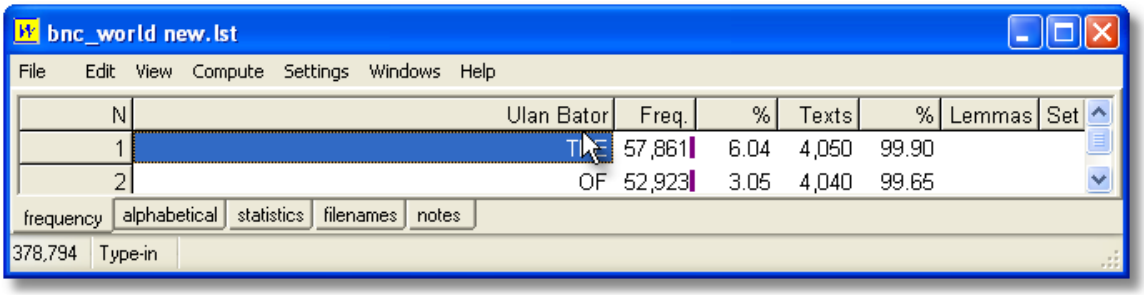
By default, a word-list will have column headings like these:



If you choose *View* | *Layout,* you get to see the various headings:



and if you double-click any of these you may edit it to change the column header as in this (absurd) example:



If you now save your word-list, the new column heading gets saved along with the data. Other new word-lists, though, will have the default WordSmith headings.

If you want *all future* word-lists to have the same headings, you should press the Save button in the layout window 54.

(If you had been silly enough to call the word column "Ulan Bator" and to have saved this for all

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subsequent word-lists, you could remedy the problem by deleting **`c:Program Files\wsmith5\wordlist list customised.dat`**.)

5.20 find relevant files

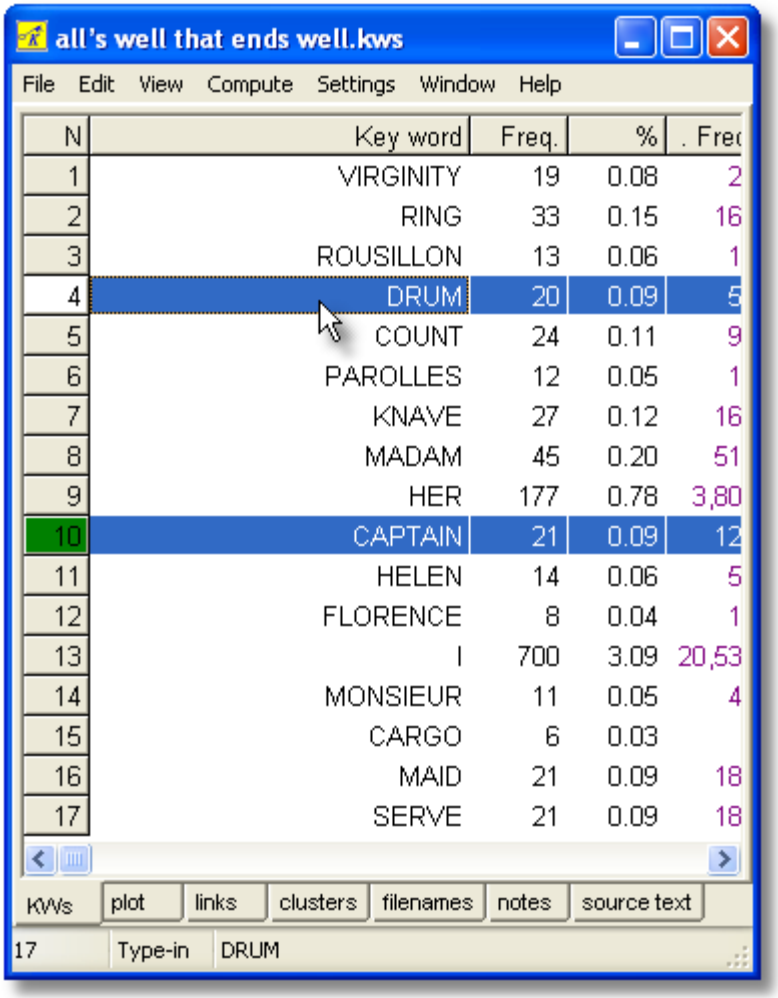
The point of it…

Suppose you have identified *muscle, fibre, protein* as key words in a specific text. You might want to find out whether there are any more texts in your corpus which use these words.

How to do it

This function can be reached in any window of data which contains the F option, e.g. a key words 5 listing.

It enables you to seek out all text files which contain **at least one** mention of **each** of the words you have marked (with). Before you click, choose the set of texts 31 which you want to peruse.



Here we have a keywords list from Shakespeare's *All's Well That Ends Well*, with two items

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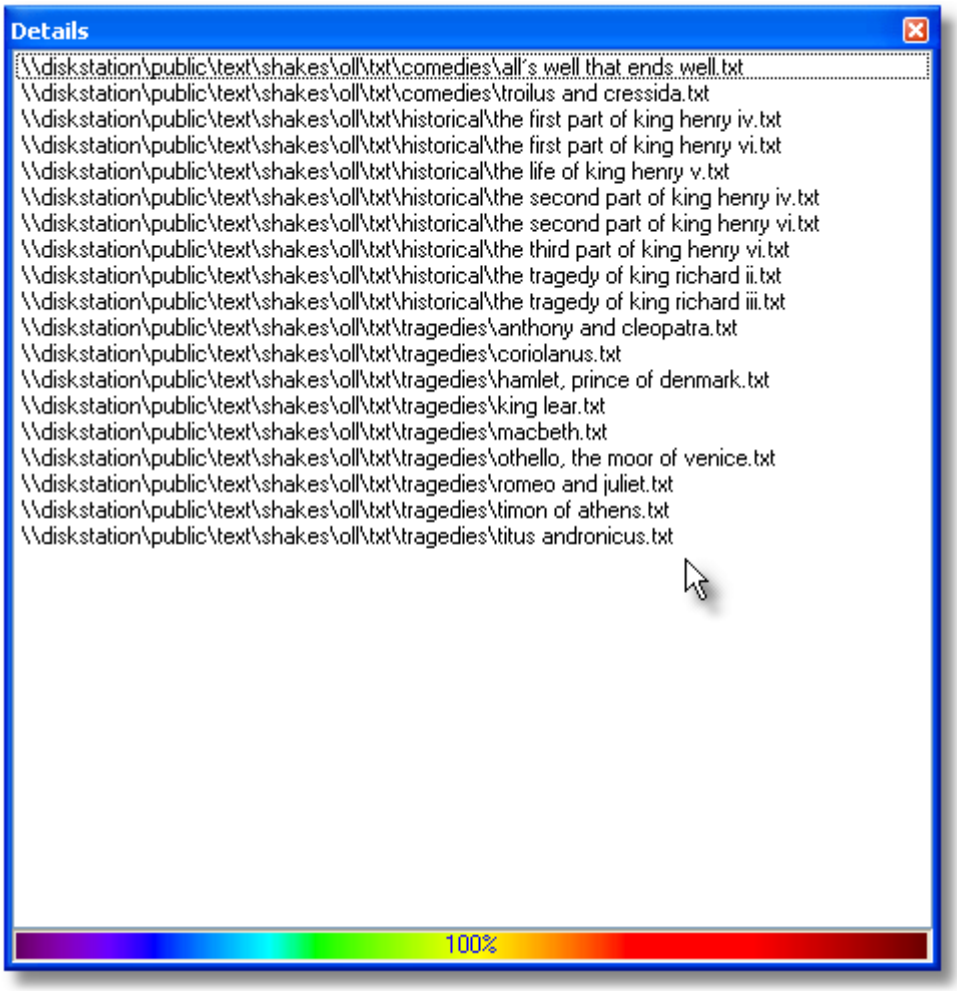
chosen. The text files to examine in this case are all the Shakespeare plays...

What you get

A display based on all the words you marked, showing which text files 271 they were found in. But it is a "fussy" list: any text file which doesn't have *all* the words you selected gets ignored. In the example below, the 19 (out of 37) plays in which both **CAPTAIN** and **DRUM** are found are listed.



5.21 fonts

Found in main Settings menu in all Tools or via *Adjust Settings* | *Text & Languages* in the Controller 4. Enables you to choose a preferred Windows font and point size for the display windows and printing 60 in all the WordSmith Tools suite. Note that each language 30 can have its own different default font.

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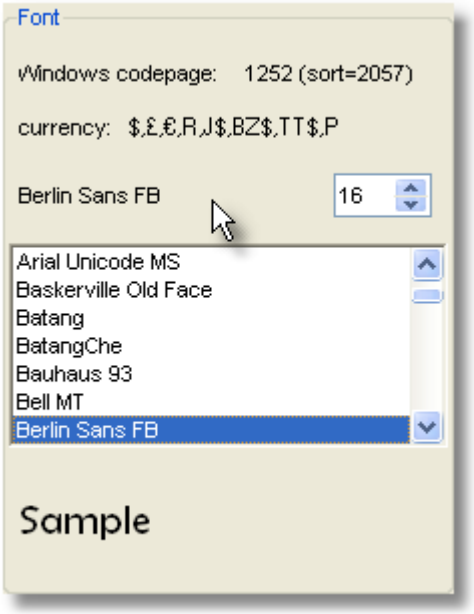

If you have data visible in any Tool, the font will automatically change; if you don't want any specific windows of data to change, because you want different font sizes or different character sets in different windows, minimise these first.

To set a column of data to bold, italics, underline etc., use the layout 54 option .

WordSmith Tools will offer fonts to suit the language 30 chosen in the top left box. Each language may require a special set of fonts. Language choice settings once saved can be seen (and altered, with care) in **`Program Files\wsmith5\language_choices.ini`**.

5.22 general settings

Found in *Adjust Settings* | *General* in the WordSmith Tools Controller 4.

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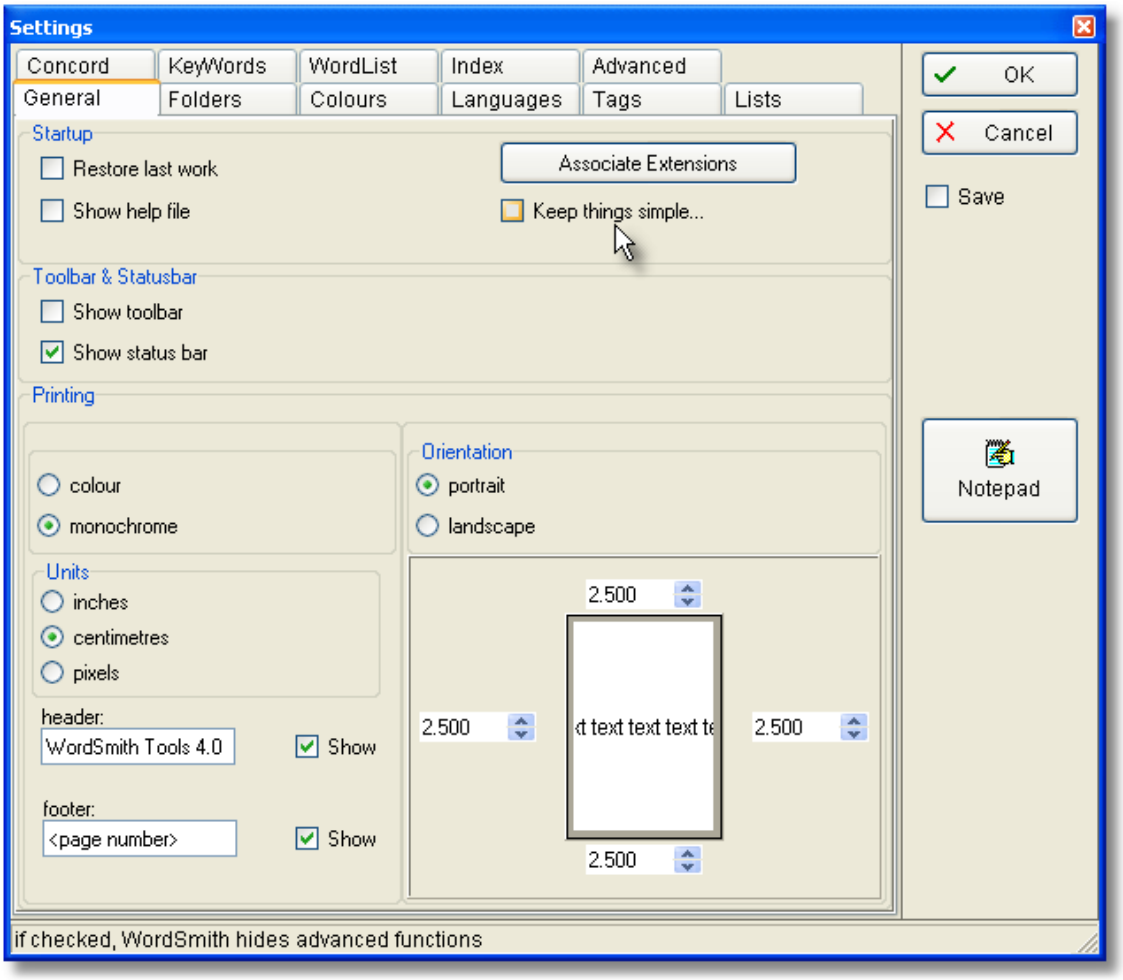

Startup

Restore last work will bring back the last word-list, concordance or key-words list when you start WordSmith.

Show Help file will call up the Help file automatically when you start WordSmith.

Keep things simple will hide advanced functions in the various Tools so you can get started more easily.

Associate Extensions will teach Windows to use Concord, WordList, KeyWords etc. to open the relevant files made by WordSmith.

Toolbar & Status bar

Each Tool has a status bar at the bottom and a toolbar with buttons at the top. By default the toolbar is hidden to reduce screen clutter.

Printing

If you set printing to monochrome, your printer will use italics or bold type for any columns using other than the current "plain text" colour 36. Otherwise it will print in colour on a colour printer, or in shades of grey if the printer can do grey shading. You can also change the units, adjust orientation (portrait or landscape) and margins and default header and footer. You can also setup your printer in Print Preview 60.

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Confirmation

You can set WordSmith Tools to confirm a print job in the defaults (wordsmith.ini) 65 file. If this contains the line confirm printing=YES then every time you print you'll be told which lines of the current concordance or list were printed.

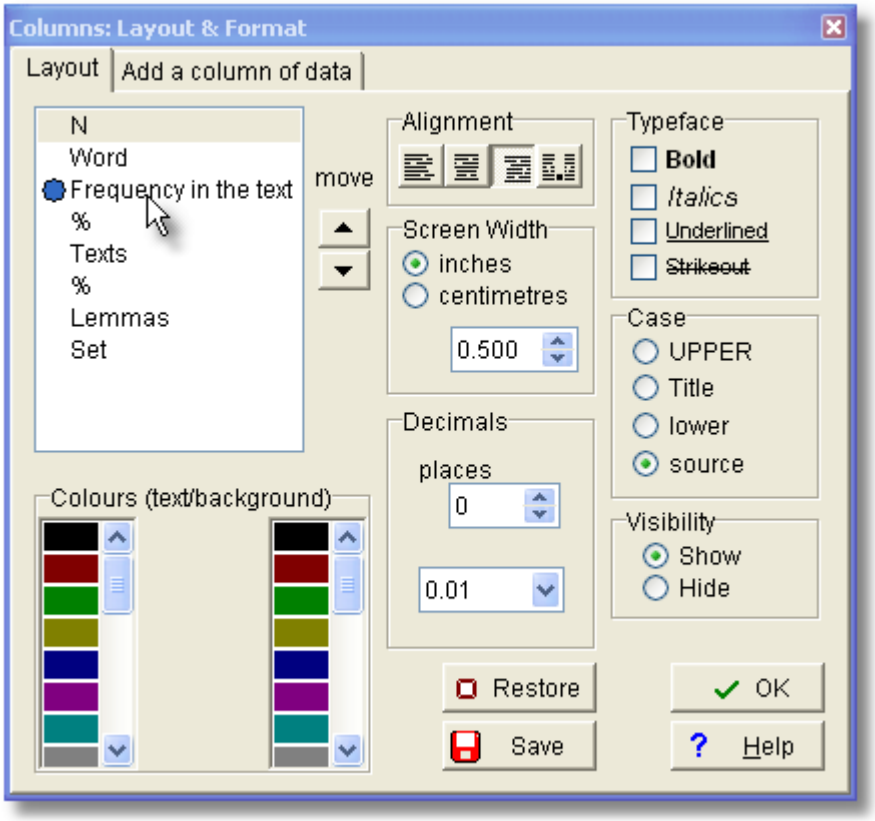
See also : Printing 60

5.23 layout & format

With any list open, right-click or choose View | Layout to choose your preferred display formats for each column of data.

Layout or Add data?

The *Layout* tab gives you a chance to format the layout of your data. *Add a column of data* lets you compute a new variable 39.



You can edit the headings 49 by double-clicking and typing in your own preferred heading. "Frequency in the text" is too long but serves to illustrate.

Move

Click on the arrows to move a column up or down so as to display it in an alternative order.

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Alignment

Allows a choice of left-aligned, centred, right-aligned, and decimal aligned text in each column, as appropriate.

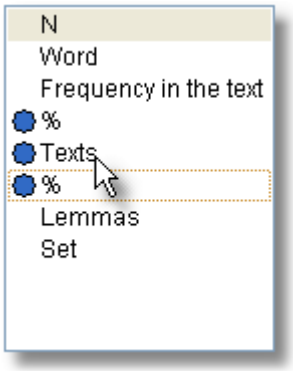
Typeface

Normal, bold, italic and/or underlined text. If none are checked, the typeface will be normal.

Screen Width

in your preferred units (cm. or inches).

Here 3 of the headings have been activated (by clicking) so that settings can be changed so as to get them all the same width.

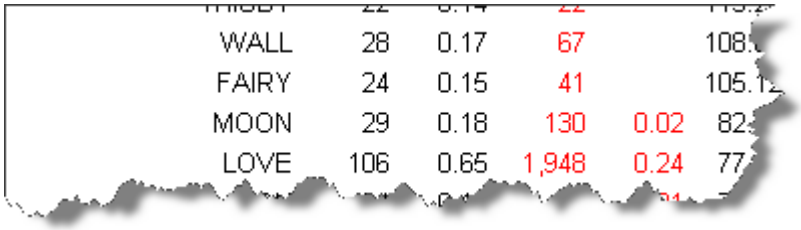


Case

lower case, UPPER CASE, Title Case or source: as it came originally in the text file. The default for most data is upper case.

Decimals

the number of decimal places for numerical data, where applicable. For example, suppose you have this list of the key words of Midsummer Night's Dream in view but want to show the numbers in the column above 0.02, corresponding to WALL, FAIRY etc.,



select the column(s) you want to affect,

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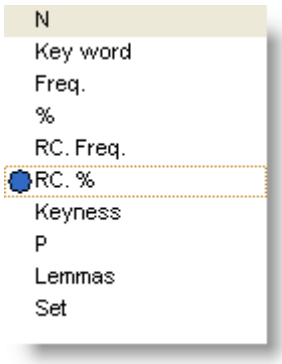
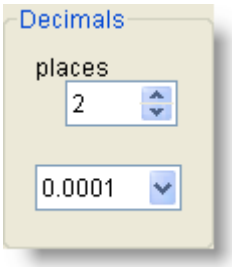
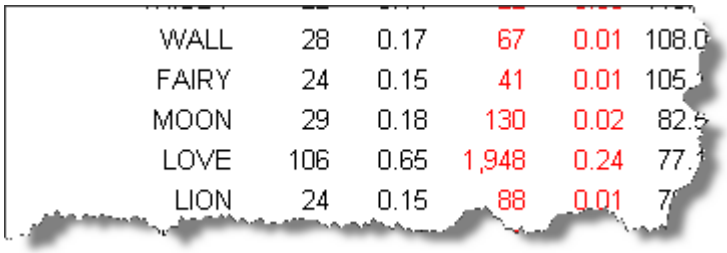


and set the decimals eg. like this



where the top number is the decimal places (2, unchanged from the default for percentage data) and the bottom is the threshold below which the data are not shown. In this case, any date smaller than 0.0001 won't be shown (the space will be blank). As soon as you make the change, you should immediately see the result.



Visibility

show or hide, or show only if greater than a certain number. (If this shows ***, then this option is not applicable to the data in the currently selected column.)

Colours

The bottom left window shows the available colours for the foreground & background. Click on a colour to change the display for the currently selected column of information.

Restore

Restores settings to the state they were in before. Offers a chance to delete any custom saved layouts (see below).

Save

The point of this Save option is to set all future lists to a preferred layout. Suppose you have a concordance open. If you change the layout as you like and save 66 the concordance in the usual way it will remember your settings anyway. But the next time you make a concordance, you'll get

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the WordSmith default layout. If you choose this Save, the next time you make a concordance, it will look like the current one.

And a custom saved layout will be found in your **Program Files\wsmith5** folder, eg. **Concordance list customised.dat.**

Alternatively you can choose always to show or hide certain columns of data with settings in your **wordsmith.ini** file. For example, in the [Concord] section of **Program Files\wsmith5\wordsmith.ini**, to avoid seeing the Set column, you would change

show set column=YES
to
show set column=NO

See also: setting & saving defaults 65, setting colour 36 choices in WordSmith Tools Controller 4.

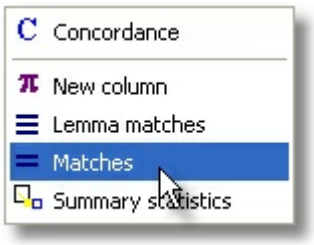
5.24 match words in list

The point of it…

This function helps you filter your listing. You may choose to relate the entries in a concordance or list of words (wordlist, collocate list, etc.) with a set of specific words which interest you. For example, to mark all those words in your list which are function words, or all those which end in **-ing**. Those which match are marked with a tilde (**~**). With the entries marked, you can then choose to delete all the marked entries (or all the unmarked ones), or sort them according to whether they're marked or not.

How to do it

With a word-list loaded up using WordList, click in the column whose data you want to match up. This will usually be one showing words, not numbers. Then choose *Compute* | *Matches*.



The main Controller settings dialogue box appears.

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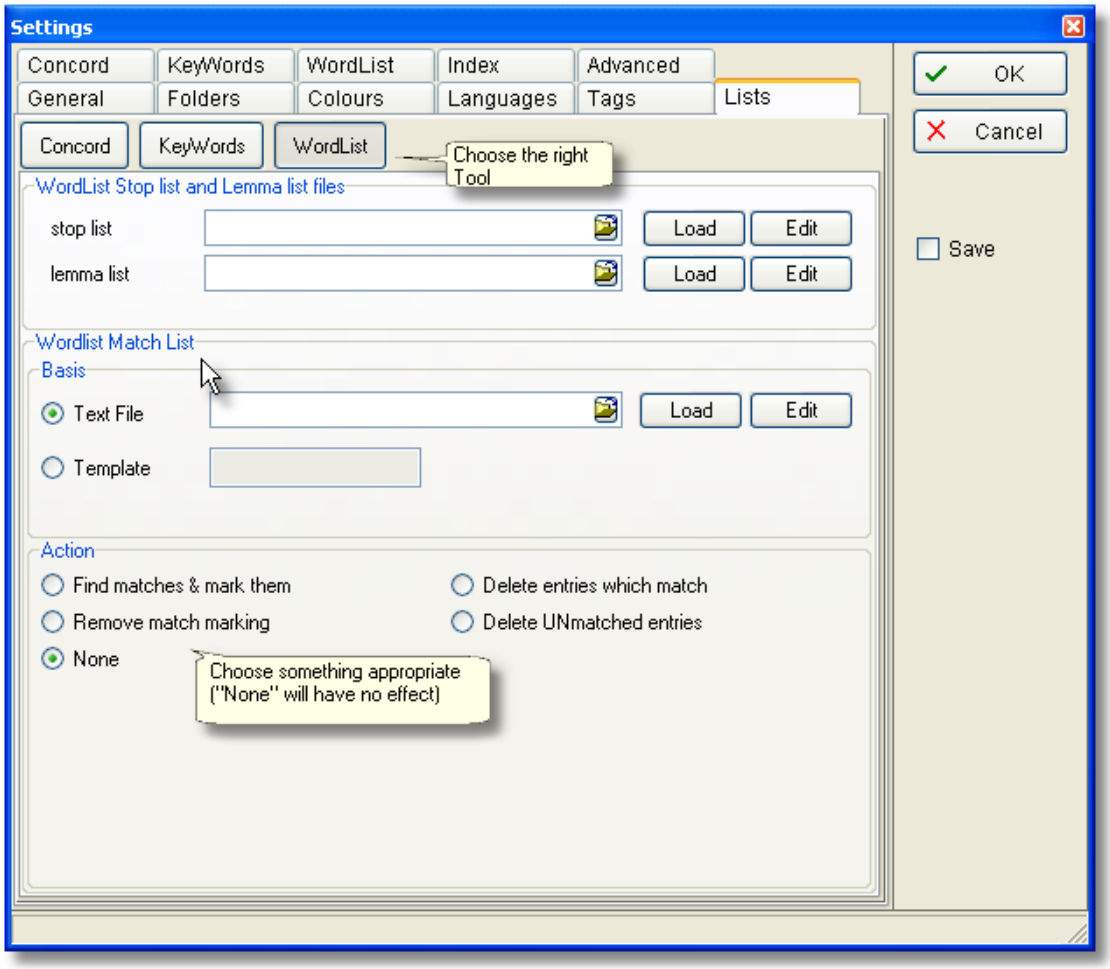

Text File or Template

Choose now whether you want to filter by using a text file which contains all the words you're interested in (e.g. a plain text file of function words [not supplied]) or a template filter such as ***ing** (which checks every entry to see whether it contains a word ending in **ing**.).

To use a match list in a file, you first prepare a file, using **Notepad** or any plain text word processor, which specifies all the words you wish to match up. Separate each word using commas, or else place each one on a new line. You can use capital letters or lower-case as you prefer. You can use a semi-colon for comment lines. There is no limit to the number of words.

Example

```
; Match list for test purposes.
THE,THIS,IS
IT
WILL
```

If you choose a file, the Controller will then read it and inform you as to how many words there are in it. (There is no limit to the number of words but only the first 50 will be shown in the Controller.)

Action

The current Tool then checks every entry in the selected column in your current list to see whether

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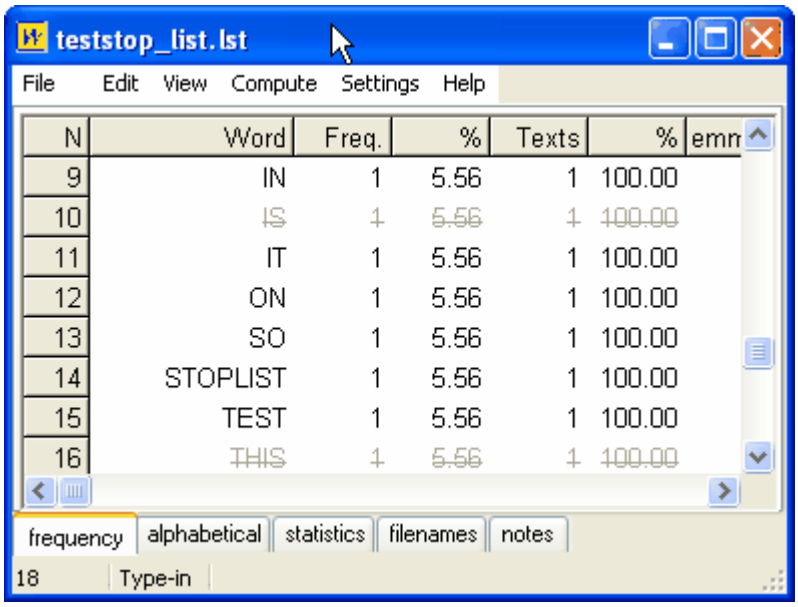
it matches either the template or one of the words in your plain text file. Those which do match are marked or deleted as appropriate for the Action requested (as in the example below where the match list included **IS** and **THIS**).



You can obtain statistics of the matches, using the Summary Statistics 40 menu option.

See also: Comparing Word-lists 159, Comparing Versions 162, Stop Lists 70, Lemma Matching 158

5.25 never used WordSmith before

For users who are starting out with WordSmith for the first time, the whole process can seem complex. (After all, the first time you used word-processing software that seemed tricky -- but you already knew what a text is and how to write one...)

So a small text file accompanies the WordSmith installation, and if WordSmith thinks you have never used it before, it will automatically choose that text file for you to start using Concord, WordList etc. WordSmith's method of knowing that you are a new user is

1) have any concordances or wordlists been saved 66?

and

2) has no set of favourite text 29 files been saved for easy retrieval?

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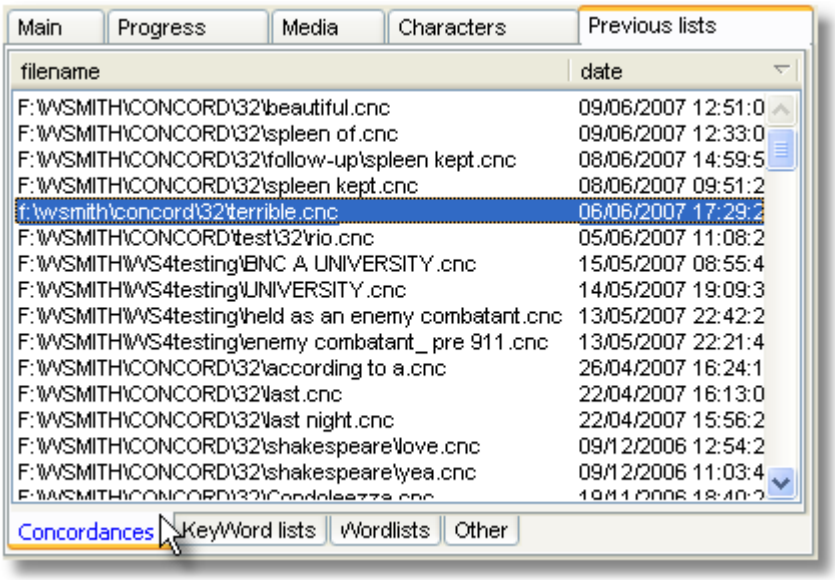
5.26 previous lists



These windows show the lists of results you have obtained in previous uses of WordSmith.

To see any of these, simply select it and double-click -- the appropriate Tool will be called up and the data shown in it.

The popup menu for the window is accessed by a right-click on your mouse.

To delete an entry, select it and then press *Del*.
To re-sort your entries click the header or choose *Resort* in the popup menu.

5.27 print and print preview

This takes you by default to a print preview, which shows you what the current page of data looks like, and from which you can print.

Bigger and Smaller

Zoom to 100% ( ) or fit to page ( ), or choose a view in the list. The display here works in exactly the same way as the printing to paper. Any slight differences between what you see and what you get are due to font differences.

Next ( ) & Last ( ) Page

Takes you forward or back a page.

Portrait ( ) or Landscape ( )?

Sets printing to the page shape you want.

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Header, Footer, Margins

You can type a header & footer to appear on each page. If you include <Date> this will put today's date. Margins are altered by clicking the numbers -- you will see the feect in the print previews space at the right.

Print ( )

This calls up the standard Windows printer page and by default sets it to print the current page. You can choose other pages in this standard dialogue box if you want.

See also: Printer Settings 52

5.28 quit WordSmith

Alt-X is the hot key.

Closing WordSmith Tools Controller 4 will close down all of the Tools.

If you press Alt-X, or use the System menu Close commands, you will get a chance to save any unsaved sets of data before the Tool in question closes. You will be asked to confirm closure if any window of data is still open.

If you're in a hurry, use the "no-check Exit" menu option which by-passes these checks.

By default, the last word list, concordance or key words listing that you saved or retrieved will be automatically restored on entry to WordSmith Tools. This feature can be turned off temporarily via a menu option or permanently in **`Program Files\wsmith5\wordsmith.ini`**.

5.29 reduce data to n entries

With a very large word-list, concordance etc., you may wish to reduce it randomly (eg. for sampling). This menu option allows you to specify how many entries you want to have in the list. If you reduce the data, entries will be randomly zapped 74 until there are only the number you want. The procedure is irreversible. That is, nothing gets altered on disk, but if you change your mind you will have to re-compute or else go back to an earlier saved version.

See also: zapping 74, editing a list of data 47.

5.30 save as text

The point of it…

Save as Text means save your data as a plain text file (as opposed to the WordSmith format for retrieving the data another day). It is usually quicker to copy selected text into the clipboard 265, e. g. if you simply want to insert your results into your word processor.

If you want to copy the data in colour, or export a plot, you should definitely use the clipboard 265.

In the case of a concordance, if you want only the words visible in your concordance line (not the number of characters mentioned below), use the clipboard and then Paste or Paste Special in graphics format.

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How to do it

This function can be reached by Save As .. | Plain text (), XML text (), Excel spreadsheet () or Print to File (via F3 or) or Copy () to text file.

Options include:

header	words you want to save at the start of the data (leave blank if none is wanted);
numbered	whether the numbers visible in the column at the left are saved too
column separator	by default a tab but you can specify something else to go between visible columns
rows	all/any which you have highlighted/a specific range, e.g. 1-10, 5-, -3
columns	all/any which you have highlighted/a specific range (column 1 is the one with the numbers)

You can then easily retrieve the data in your spreadsheet, database, word-processor, etc. (If you want to use it as a table in a word processor, first save as text, then in your word-processor choose the Convert Text to Table option if available. Choose to separate text at tabs.)

Note: The Excel spreadsheet () save can only handle up to 65,000 rows and 256 columns. It will look something like this:

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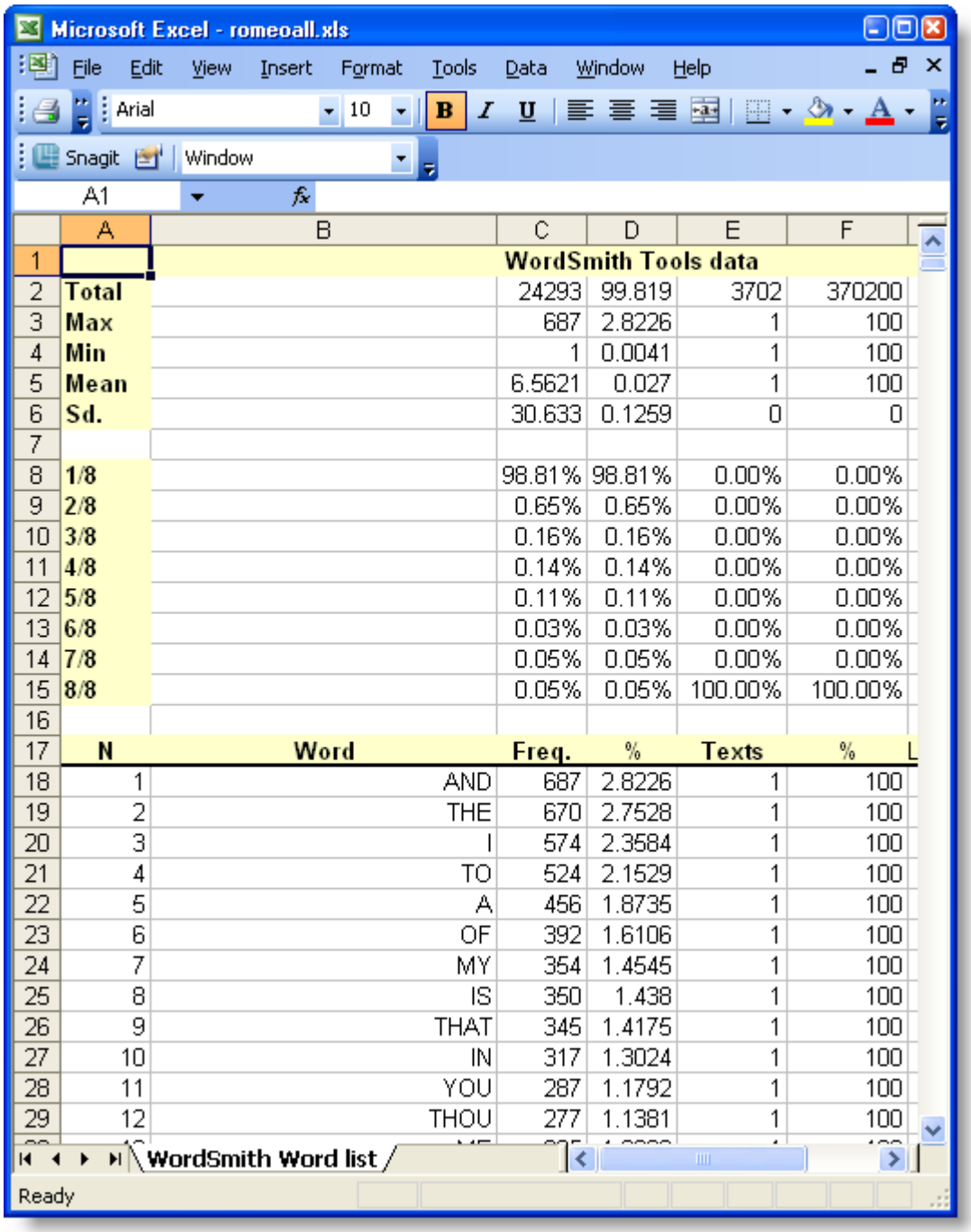

Microsoft Excel - romeoall.xls

File Edit View Insert Format Tools Data Window Help

Arial 10 B I U

Snagit Window

A1

	A	B	C	D	E	F
1			WordSmith Tools data			
2	Total		24293	99.819	3702	370200
3	Max		687	2.8226	1	100
4	Min		1	0.0041	1	100
5	Mean		6.5621	0.027	1	100
6	Sd.		30.633	0.1259	0	0
7						
8	1/8		98.81%	98.81%	0.00%	0.00%
9	2/8		0.65%	0.65%	0.00%	0.00%
10	3/8		0.16%	0.16%	0.00%	0.00%
11	4/8		0.14%	0.14%	0.00%	0.00%
12	5/8		0.11%	0.11%	0.00%	0.00%
13	6/8		0.03%	0.03%	0.00%	0.00%
14	7/8		0.05%	0.05%	0.00%	0.00%
15	8/8		0.05%	0.05%	100.00%	100.00%
16						
17	N	Word	Freq.	%	Texts	%
18	1	AND	687	2.8226	1	100
19	2	THE	670	2.7528	1	100
20	3	I	574	2.3584	1	100
21	4	TO	524	2.1529	1	100
22	5	A	456	1.8735	1	100
23	6	OF	392	1.6106	1	100
24	7	MY	354	1.4545	1	100
25	8	IS	350	1.438	1	100
26	9	THAT	345	1.4175	1	100
27	10	IN	317	1.3024	1	100
28	11	YOU	287	1.1792	1	100
29	12	THOU	277	1.1381	1	100

WordSmith Word list

Ready

The words are visible from row 18 onwards; above them we get some summary data. The 1/8, 2/8 etc. section splits the data into eighths; thus 100% of the Texts data (column E) is in the 8th section, whereas nearly all the data (98.8%) are in the smallest section in terms of word frequency, because so many words come once only.

In the case of a concordance line, saving as text will save as many "characters in 'save as text'" as you have set (adjustable in the Controller Concord Settings 133). The reason for this is that you will probably want a fixed number of characters, so that when using a non proportional font the search-words line up nicely. See also: Concord save and print 106.

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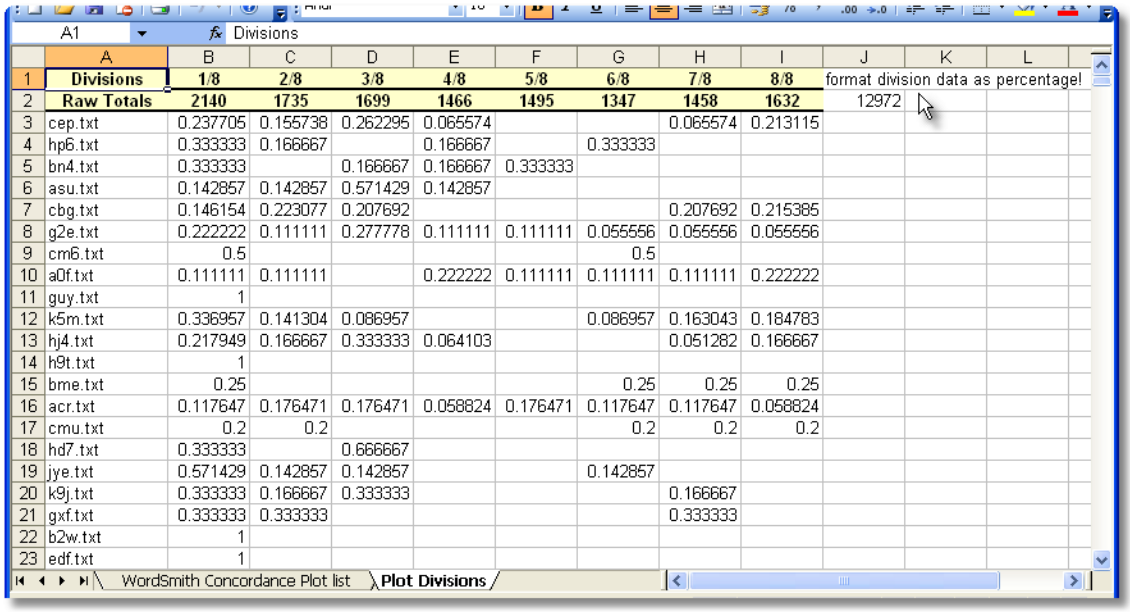
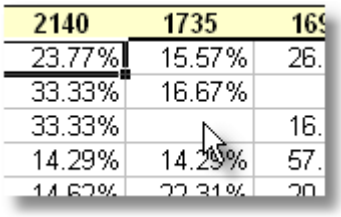
If your data contains a plot you will also get another worksheet in the Excel file, looking like this.



	A	B	C	D	E	F	G	H	I	J	K	L
1	**Divisions**	**1/8**	**2/8**	**3/8**	**4/8**	**5/8**	**6/8**	**7/8**	**8/8**	format division data as percentage!		
2	**Raw Totals**	**2140**	**1735**	**1699**	**1466**	**1495**	**1347**	**1458**	**1632**	12972		
3	cep.txt	0.237705	0.155738	0.262295	0.065574			0.065574	0.213115			
4	hp6.txt	0.333333	0.166667		0.166667		0.333333					
5	bn4.txt	0.333333		0.166667	0.166667	0.333333						
6	asu.txt	0.142857	0.142857	0.571429	0.142857							
7	cbg.txt	0.146154	0.223077	0.207692				0.207692	0.215385			
8	g2e.txt	0.222222	0.111111	0.277778	0.111111	0.111111	0.055556	0.055556	0.055556			
9	cm6.txt	0.5					0.5					
10	a0f.txt	0.111111	0.111111		0.222222	0.111111	0.111111	0.111111	0.222222			
11	guy.txt	1										
12	k5m.txt	0.336957	0.141304	0.086957			0.086957	0.163043	0.184783			
13	hj4.txt	0.217949	0.166667	0.333333	0.064103			0.051282	0.166667			
14	h9t.txt	1										
15	bme.txt	0.25					0.25	0.25	0.25			
16	acr.txt	0.117647	0.176471	0.176471	0.058824	0.176471	0.117647	0.117647	0.058824			
17	cmu.txt	0.2	0.2				0.2	0.2	0.2			
18	hd7.txt	0.333333		0.666667								
19	jye.txt	0.571429	0.142857	0.142857			0.142857					
20	k9j.txt	0.333333	0.166667	0.333333				0.166667				
21	gxf.txt	0.333333	0.333333					0.333333				
22	b2w.txt	1										
23	edf.txt	1										

WordSmith Concordance Plot list | Plot Divisions

The plot data are divided into the number of segments set for the ruler 279 (here they are eighths), and the percentage of each get put into the appropriate columns. That is, cell B3 means that 23.7% of the cep.txt data come in the first eighth of the text file. Set the format correctly as percentages in Excel, and you will see something like this:



2140	1735	16
23.77%	15.57%	26.
33.33%	16.67%	
33.33%		16.
14.29%	14.29%	57.
14.62%	22.31%	20

At the top you get the raw data, which you can use Excel to create a graphic with.

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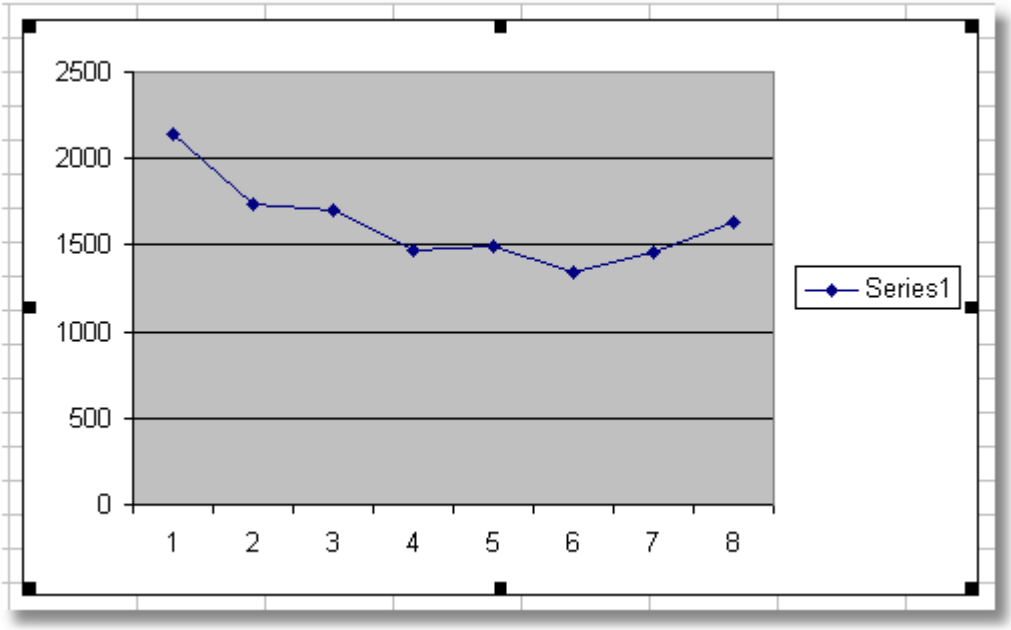

In the case of XML text ( ), you get a little .HTM file and a large .XML file. Click on the .HTM file and you can see your data a page at a time, with buttons to jump forwards or back a page, as well as to the first and last pages of data. This accesses your .XML file to read the data itself.

See also: Excel Files in batch processing 26

5.31 save defaults

Settings can be altered by choosing *Adjust Settings* in the WordSmith Tools Controller 4.
Any setting menu item in any Tool gives you access to these:

General, Folders, Colours, Languages, Tags, Lists, Concord, KeyWords, WordList, Index, Advanced, WSConcgram

These tabs allow you to choose settings which affect one or more of the Tools.

colours 36	customise the default colours
folders 271	set WordSmith so it "knows" which folders you usually use
languages 72	character set 264, treatment of hyphens 275 & numbers, default file extension
general	restore last file 284, printing 52
tags 76	tags to ignore, tag file, tag file autoloading, custom tagsets 45
stop lists 70	for Concord, KeyWords and Wordlist
matching	files 57 to match up, or lemma files 165 to mark lemmas in a word list, etc.
Concord	number of entries, sort system, collocation horizons 96
KeyWords	procedure 147, max. p value 148, database & associate minimum frequencies, reference corpus 284 filename
WordList	word length & frequencies, type/token # 184, cluster 285

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	settings
Index 168	making a wordlist index
Advanced 23	advanced settings
WSConcgram	for the concgram 10 utility

permanent settings and wordsmith.ini file

You can save your settings by checking the save box after adjusting settings. Or by editing the **wordsmith.ini** file, installed when you installed WordSmith Tools. This specifies all the settings which you regularly use for all the suite of programs, such as your text and results folders 271, screen colours 36, fonts 51, the default columns 54 to be shown in a concordance, etc.

You can see **Program Files\wsmith5\wordsmith.ini** by choosing *Settings* | *See Current*.

show help file

In the general tab of Adjust Settings you will see a checkbox called "show help file". If checked, this will always show this help file every time WordSmith starts up. The point of this is for users who only use the software occasionally, e.g. in a network installation.

sayings

Using Notepad, you can edit **wsmith5\sayings.txt**, which holds sayings that appear in the main Controller 4 window, if you don't like the sayings or want to add some more.

network and CD-ROM defaults

If you're running WordSmith straight from a CD-ROM, your defaults cannot be saved on it as it's read-only; Windows will find a suitable place for **wordsmith.ini**, usually the root folder of **c:**.

The first time you use WordSmith, you will be prompted to Adjust Settings, choose appropriate Folders 271, Text 72 Characteristics, Tag 76 details etc. and enable the Save checkbox, after which your settings will be saved for future use. You can change settings and save them as often as you like.

Similarly, on a network you will usually not be allowed to change defaults permanently, as this would affect other users. Your network administrator should have installed the program so that you have your own copy of **wordsmith.ini**, where it may be both read and altered. If WordSmith Tools finds a copy of **wordsmith.ini** in that folder it will be able to use your personal preferences.

5.32 save results

To save your corrected results use *Save* (F2) in the menu. This saves all the results so you can return to the data at a later date. You may wish to clean up any deleted items by zapping 74, first.

Saved data is in a special **WordSmith Tools** format. The only point of it is to make it possible to use the data again another day. You will not be able to examine it usefully outside the Tools. If you want to export your data to a spreadsheet, graphics program, database or word processor, etc., you can do this either by saving as text 61 or by copying the data to the clipboard 265.

save part of the data only

By default, and save all your data that you haven't zapped 74. If you want to save only part of it, but don't want to zap it to oblivion, choose Copy 40.

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5.33 search & replace

Some lists, such as lists of filenames 69, allow for searching and replacing.

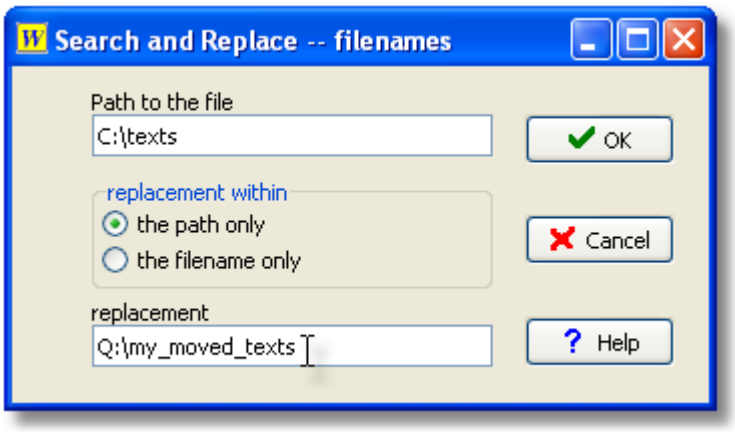
The point of it

If your text data has been moved from one PC to another, or one drive to another, it will be necessary to edit all the filenames if WordSmith ever needs to get at the source texts, such as when computing a concordance from a word list 143.)

Search & Replace for filenames

If you are replacing a filename you will see something like this. We distinguish between the path and the file's individual name, so that for a case like **`C:\texts\BNC\spoken\s conv\KC2.txt`** the filename is **`KC2.txt`** and the path to it is **`C:\texts\BNC\spoken\s conv`**.

To correct the path to the file, e.g. if you've moved your BNC texts to drive **`Q:\my_moved_texts`** you might simply replace as shown here



and all the filenames which contain **`c:\texts`** will get **`Q:\my_moved_texts`** e.g. **`C:\texts\BNC\spoken\s conv\KC2.txt`** will become **`Q:\my_moved_texts\BNC\spoken\s conv\KC2.txt.`**

To rename a filename only, change the radio buttons in the middle of the window and the search and replace operation will ignore the path but replace within the filename only.

Search & Replace for other data

In this case the search & replace isn't of filenames but in the case below in *Viewer and Text Aligner*, of the actual text. Like a search 69 operation, the search operates on the *current column* of data.

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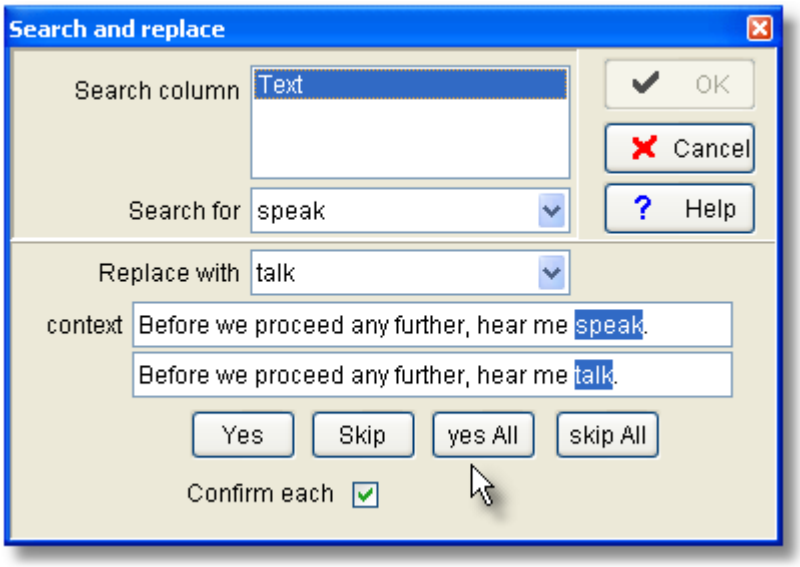

The context line shows what has been found.
The line below shows what will happen if you agree to the change.

Yes: make 1 change (the highlighted one), then search for the next one
Skip: leave this one unchanged, search for the next one
Yes All: change without any check
Skip All: stop searching...

Whole word – or bung in an asterisk

The syntax is as in Concord, so by default a whole word search. To search for a suffix or prefix, use the asterisk. Thus ***ed** will find any entry ending in **ed**; **un*** will find any entry starting with **un.** ***book*** will find any entry with **book** in it (**book, textbook, booked.**)

Word lists can be sorted by suffix: see WordList sorting 186.

See also: Searching by Typing 68, Searching with F12 69, Accented Characters & Symbols 265.

5.34 search by typing

Whenever a column of display is organised alphabetically, you can quickly find a word by typing. As you type, **WordSmith** will get nearer. If you've typed in the first five letters and **WordSmith** has found a match, there'll be a beep, and the edit window will close. You should be able to see the word you want by now.

See also: Edit v. Type-in mode 270, Searching for a word or part of one 69, Search & Replace 67, Editing 47, WordList sorting 186

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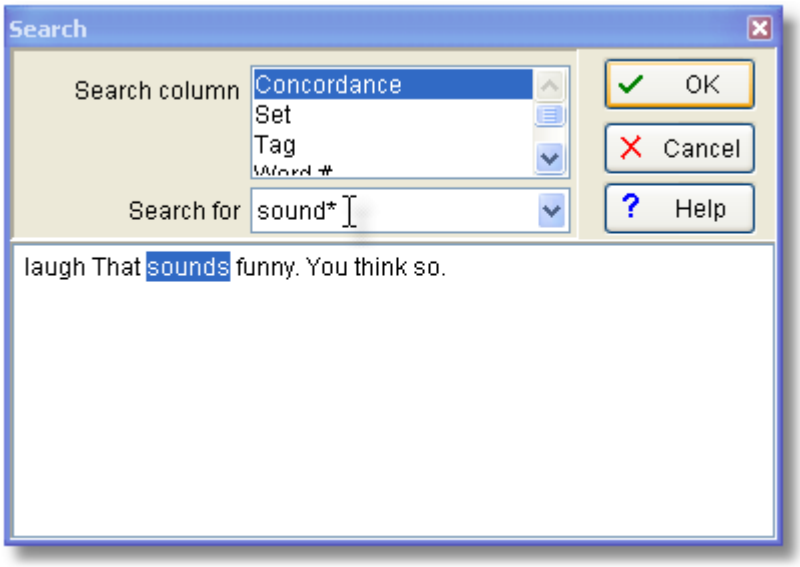
5.35 search for word or part of word

All lists allow you to search for a word or part of one, or a number. The search operates on the *current column* of data, though you can change the choice as in this screenshot.



The syntax is as in Concord. As the example shows, **sound*** has located the word **sounds** within a concordance and shows some of its context. To find again, press OK again....

Whole word – or bung in an asterisk

The syntax is as in Concord, so by default a whole word search. To search for a suffix or prefix, use the asterisk. Thus ***ed** will find any entry ending in **ed**; **un*** will find any entry starting with **un**. ***book*** will find any entry with **book** in it (**book, textbook, booked.**)

Word lists can be sorted by suffix: see WordList sorting 186.

See also: Searching by Typing 68, Search & Replace 67, Accented Characters & Symbols 265.

5.36 see filenames

This button enables you to open a new window, displaying the text filename 279 from which your current data comes. You can edit these names if necessary (e.g. if the text files have been moved or renamed.) To do so, choose Replace ( ).
Afterwards, if you save the results 66, the information will be permanently recorded.

In the case of key word lists, the data comes from a word list. If the word list was based on just one text file, you'll see the text file name, but if on more than one, you'll see the name of the word list file itself: to see the original text file names, you could open up the word list and press the filenames button in that.

See also: finding source files 271.

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5.37 stop lists

Stop lists are lists of words which you don't want to include in analysis. For example you might want to make a word list or analyse key words excluding common function words like *the, of, was, is, it*.

To use stop lists, you first prepare a file, using **Notepad** or any plain text word processor, which specifies all the words you wish to ignore. Separate each word using commas, or else place each one on a new line. You can use capital letters or lower-case as you prefer. You can use a semi-colon for comment lines. There is no limit to the number of words.

There is a file called **`stoplist.stp`** (in your **`Program Files\wsmith5`** folder) which you could use as a basis and save under a new name.

Example

```
; My stop list for test purposes.
THE,THIS,IS
IT
WILL
```

Then select *Stop List* in the menu to specify the stop list(s) you wish to use. Separate stop lists can be used for the **WordList** and **KeyWords** programs. If the stop list is *activated*, it is in effect: that is, the words in it will be stopped from being included in a word list. If you wish always to use the same stop list(s) you can specify them in **wordsmith.ini** as defaults 65.

See Match List 57 for a more detailed explanation, with screenshots.

Another method of making a stop list file is to use **WordList** on a large corpus of text, setting a high minimum frequency if you want only the high-frequency words. Then save it as a text file. Next, use the **Text Converter** to format it, using **stoplist.cod** as the Conversion file 233.

See also: Making a Tag File 82, Match List 57, Lemmatisation 158.

5.38 suspend processing

As WordSmith works its way through text files, or re-sorting data, you will see a progress window in the Controller with horizontal bars showing progress. If appropriate there'll be a *Suspend* button, too. Pressing this offers 4 choices:

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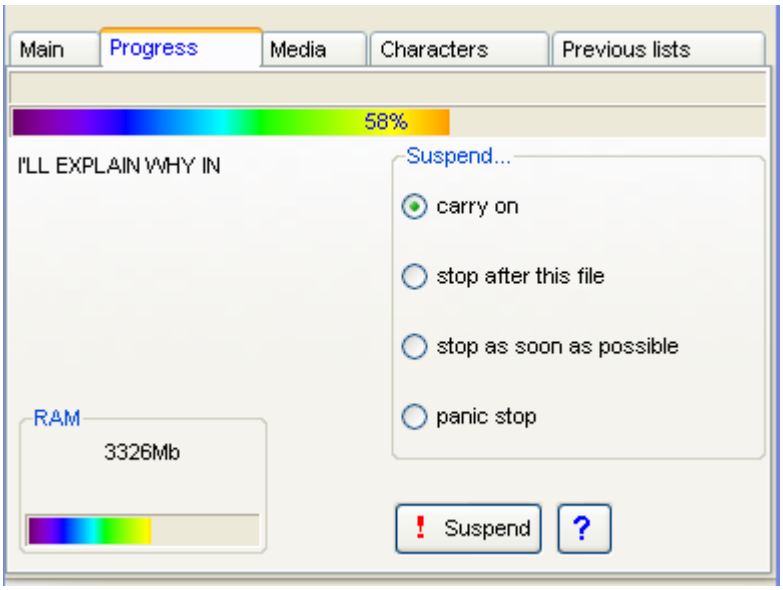

carry on

... as if you had not interrupted anything

stop after this file

Finishing the file means that you can keep track of what has been done and what there wasn't time for. (How? By examining the filenames in the word list, concordance or whatever you have just been creating.)

stop as soon as possible

...useful if you're ploughing through massive CD-ROM files. WordSmith will stop processing the current file in the middle, but will retain any data it has got so far.

panic stop

The whole Tool (Concord or WordList, or whatever) will close down and some system resources memory 283 may be wasted. The Controller 4 will not be closed down.

Press *Suspend* again to effect your choice.

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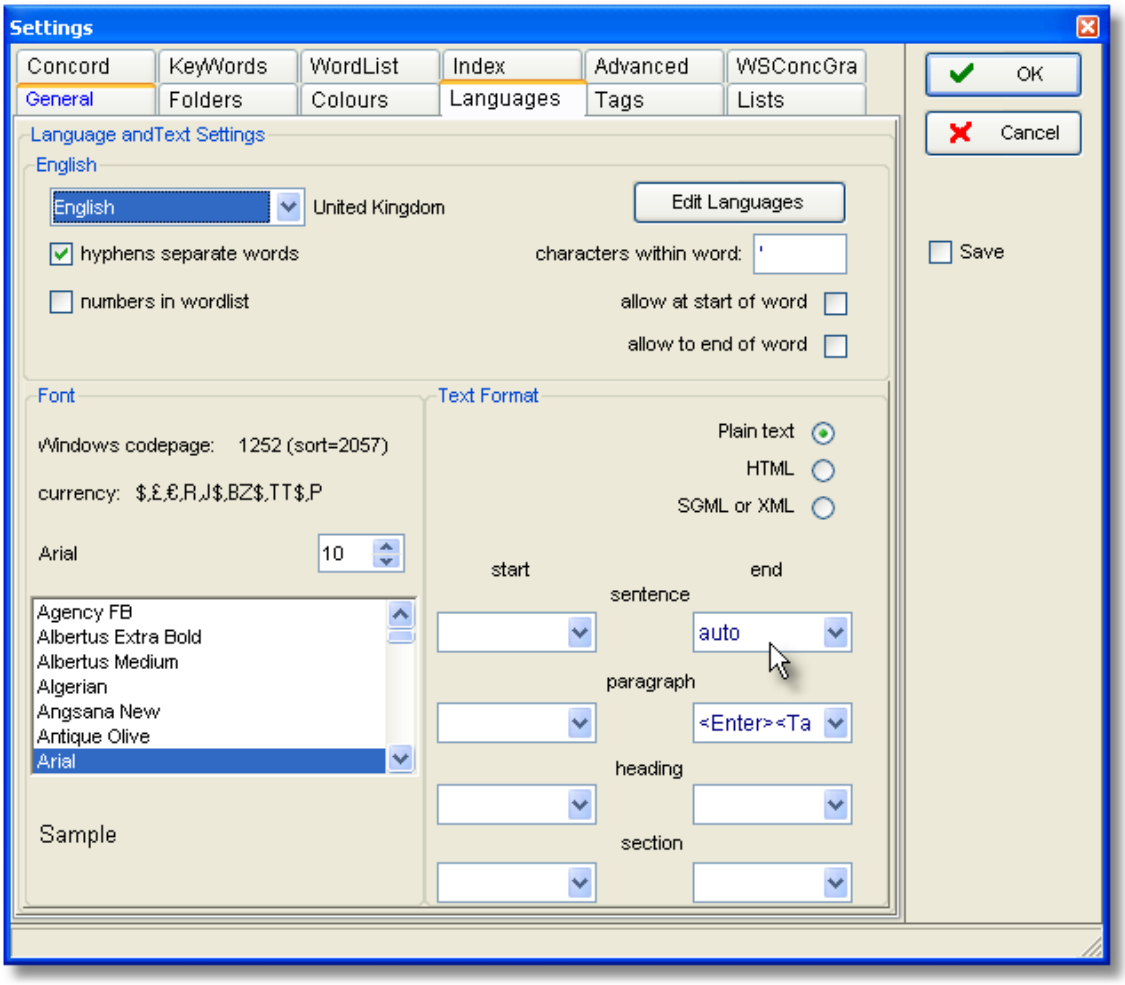
5.39 text and languages



These settings affect how WordSmith will handle your texts. At the top, you see boxes allowing you to choose the language family (eg. English) and sub-type (UK, Australia etc.). These choices are determined by the preferences you have previously set. That is, the expectation is that you only work with a few preferred languages, and you can set these preferences once and then forget about them. You do this by pressing the Edit Languages 6 button.

The choices below may differ for each language:

hyphens and numbers

You can also specify whether hyphens are to count as word separators. If the hyphen box is checked [X], **`self-access`** will be treated as two words.

Should numbers be included in a word-list as if they were ordinary words? If you leave this checkbox blank, words like $300, 50.3M or 10th will be ignored in word lists, key words, concordances etc. and replaced by a #. If you switch it on, they will be included.

characters within word

WordSmith automatically includes as valid alphabetical symbols all those determined by the

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operating system as alphabetical for the language chosen. So, for English, A to Z and common accents such as **é**. For Arabic or Japanese, whatever characters Microsoft have determined count as alphabetic.

But you may wish to allow certain additional characters within a word. For example, in English, the apostrophe in **father's** is best included as a valid character as it will allow processing to deal with the whole word instead of cutting it off short. (If you change language to French you might not want apostrophes to be counted as acceptable mid-word characters.)

Examples:

' (only apostophes allowed in the middle of a word)
'% (both apostophes and percent symbols allowed in the middle of a word)
'_ (both apostophes and underscore characters allowed in the middle of a word)

You can include up to 10.

If you want to allow **fathers'** too, check the *allow to end of word* box. If this is checked, any of these symbols will be allowed at either end of a word as long as the character isn't all by itself (as in **" ' "**).

Plain Text/HTML/SGML

Your texts may be Plain Text in format: the default. If they are tagged 76 in HTML, SGML or XML 274 you should choose one of the options here. That way, the Tools can make optimum use of sentence, paragraph and heading markup.

Windows format etc.

Information about Windows character sets 264 for the language you are working with.

start & end of heading

For the Tools to count headings, they need to know how to recognise the start and end of one. If your text is tagged 76 e.g. with **<h1>** and **</h1>**, type **<h#>** and **</h#>** in here. (# stands for any digit, ## for two, etc.) Whatever you type is case sensitive: **</H#>** is not the same as **</h#>**. (If you have HTML 274 text which is not consistent, using sometimes **</h1>** and sometimes **</H1>**, then use Text Converter 7 to make your texts consistent).

start & end of section

If these boxes contain eg. **<div#>** and ** **, the Tools will treat identify sections. Again, whatever you type is case sensitive.

start & end of sentence

If this space contains the word **auto**, the Tools will treat sentences as defined 269 (ending with a full stop, question mark or exclamation mark, and followed by a capital letter), but if your text is tagged 76 e.g. with **<s>** and **</s>**, type those in here. Again, whatever you type is case sensitive.

start & end of paragraph

For the Tools to recognise paragraphs, they need to know what constitutes a paragraph start and/or end, e.g. a sequence of two <Enter>s (where the original author pressed Enter twice) or an <Enter> followed by a <Tab>. For that you would type **<Enter><Tab>**. If your text is tagged 76 e.g. with ** ** and ** **, you can type the tag in here. Case sensitive, too.

In many cases you may consider that defining a paragraph end will suffice (considering everything up to it to be part of the preceding one). Much HTML text does not consistently distinguish between paragraph starts and ends.

Note that spoken texts in the BNC use **</u>** instead of ** **, but you can leave ** ** here as WordSmith will use **</u>** instead if the text has no ** ** in it.

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See also: Tagged Text 76, Stop Lists 70, Choosing a new language 6. Processing text in Chinese etc.

5.40 window management

The main WordSmith Tools Controller 4 will be at the top left corner of your screen, half the screen width and half the screen height in size. Other Tools will appear in the middle. Each Tool main window will come just below any previous ones.

Make use of the Taskbar (or Alt-tab, which helps you to switch easily from one window to the next).

"Start another Concord window"?

You will see this if you already have a window of data and press *New* to start another concordance. You can have any number of windows open for each Tool, each with different data.

minimising, moving and resizing windows

All windows can be stretched or shrunk by putting the mouse cursor at one edge and pulling. They can be moved most easily by grabbing the top bar, where the caption is, and pulling, using the mouse. You can minimise a window: it becomes an icon which you restore by clicking on it. If you maximise it, it will fill the entire screen of the Tool concerned. These are standard Windows functions. It's okay to minimise the main Controller 4 window when using individual Tools.

tile and cascade

You can *Tile* or *Cascade the Tools* from the main **WordSmith Tools** program.

restore last file

A convenience feature: the last file you saved or retrieved will by default be restored when you re-enter WordSmith Tools. I've kept it to one only to avoid screen clutter! This feature can be turned off temporarily via a settings option or permanently in **`wordsmith.ini`** (in your **`Program Files\wsmith5`** folder). You can also generally access your last saved result in any Tool by

right-clicking and choosing last file:

5.41 zap unwanted lines

To restore the correct order to your data after editing it a lot or marking lines for deletion, press the Zap button (or Ctrl-Z). This will permanently cut out all lines of data which you have deleted (by pressing Del) unless you've restored them (Ins).

In the case of a word list, it will also re-order the whole file in correct frequency order. Any deleted entries are lost at this stage. Any which have been assigned as lemmas of head words may still be viewed, before or after saving. However, after zapping, lemmas can no longer be undone.

See also : reduce data to N entries 61.

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WordSmith Tools

Tags and Markup

6 Tags and Markup

6.1 overview

What is markup for?

Marked up text is text which has extra information built into it with *tags*, e.g. "We<pronoun> like<verb> spaghetti<noun>.<end of sentence>". You may wish to concordance words or tags…

You may wish to *see* this additional information or *ignore* it, so that you just see the plain text ("We like spaghetti."). **WordSmith Tools** has been designed so that you can choose what to ignore and what to see.

You may want to *translate* HTML or SGML 274 tags or entity references: if your text has **É** you probably want to see **É**.

You may wish to *select* within text files, e.g. cutting out a header or getting only the conclusions, instead of using the whole text.

And you might want to get **WordSmith Tools** to choose only files meeting certain criteria, e.g. having "sex=f" in a text file header section, where the speaker is a woman.

You can see the effect of choosing tags if you select the Choose Texts option, then press the View 256 button. Any retained tags will be visible, and ignored tags replaced by spaces.

See also: Guide to handling the BNC, Handling Tags 76, Making a Tag File 82, Showing Nearest Tags in Concord 119, Concord Sound and Video 109, Tag Concordancing 112, Types of Tag 85, Viewing the Tags 256, Using Tags as Text Selectors 77, Tags in WordList 191

6.2 choices in handling tags

ignore all tags

Specify all the opening and closing symbols in *Adjust Settings |Tags |Tags to Ignore* and such tags will be simply left out of word lists and concordances, as if they weren't in the original text files.

example :

<*>	This will cut out all wording starting at each **<** symbol and ending at the next **>** symbol (up to 1,000 characters apart)

ignore some tags and retain others

If you want to ignore some but retain others, you will need to prepare a tag file 82 which lists all those you want to keep. These will then appear in your word lists and concordances.

You get WordSmith Tools to read this text file in by choosing the Tag File menu option under Settings. Such tags will then be incorporated into your word lists, concordances, etc. as if they were ordinary words or suffixes.

example: supposing you've set **<*>** as "tags to ignore", but listed **<title>**, **<body>** and **<conclusion>** as tags to retain in your tag file, WordSmith will keep any instances of **<title>**, **<body>** or **<conclusion>** in your data but will ignore **<introduction>, <Ulan Bator>, <threat>**, etc.

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Tags to retain will only be active if there's a filename 279 visible and you have pressed the *Load* or *Clear* button. If you press *Load*, you will see which tags have been read in from the tag file.

If you declare the filename in your defaults 65 (**wordsmith.ini**) and include **autoload tagfile=YES**, the tags will be automatically loaded as WordSmith starts up.

translate entity references into other characters

If you use XML, SGML or HTML 274 tagged text, you may want to translate symbols. For example, SGML, XML, HTML use **—** instead of a long dash. To do this, first prepare a Tag File 82 which contains the strings you want to translate. Then choose *Adjust Settings* | *Tags & Markup* | *Entity File (entities to be translated)* and choose your entity file. WordSmith will then translate any entity references in this file into the corresponding characters.

If you declare the filename in your defaults 65 (**wordsmith.ini**) and include **autoload tags to translate file=YES**, the entities will be automatically loaded as WordSmith starts up.

See also: Guide to handling the BNC, Overview of Tags 76, Making a Tag File 82, Showing Nearest Tags in Concord 119, Tag Concordancing 112, Types of Tag 85, Viewing the Tags 256, Using Tags as Text Selectors 77, Tags in WordList 187

6.3 tags as selectors

Defaults

The defaults are: select *all* sections of *all* texts selected in Choose Texts 31 but cut out all angle-bracketed tags.

Custom settings

There are various alternatives in this box which help your choices with the boxes below. Choosing *British National Corpus World Edition* (as in the screenshot) will for example automatically put **</teiHeader>** into the Document header ends box below. You can also edit the options 45 and their effects.

Markup to ignore

If you want to cut out unwanted tags eg. in HTML 274 files, leave something like **< >** or **[ ]** or **< >;[ ]** in *Markup to ignore*. The "search-span" means how far should WordSmith look for a closing symbol such as **>** after it finds a starting symbol such as **<**. (The reason is that these symbols might also be used in mathematics.)

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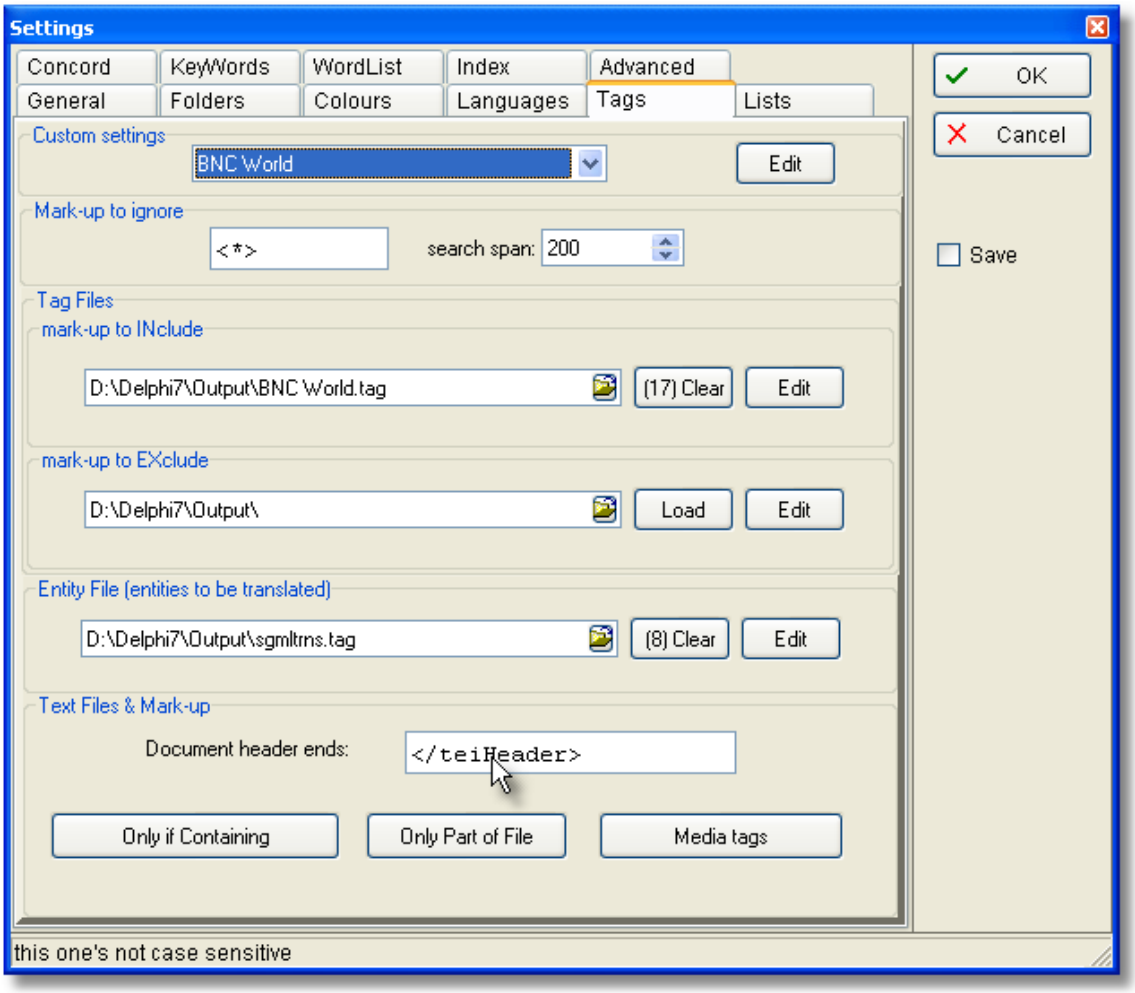
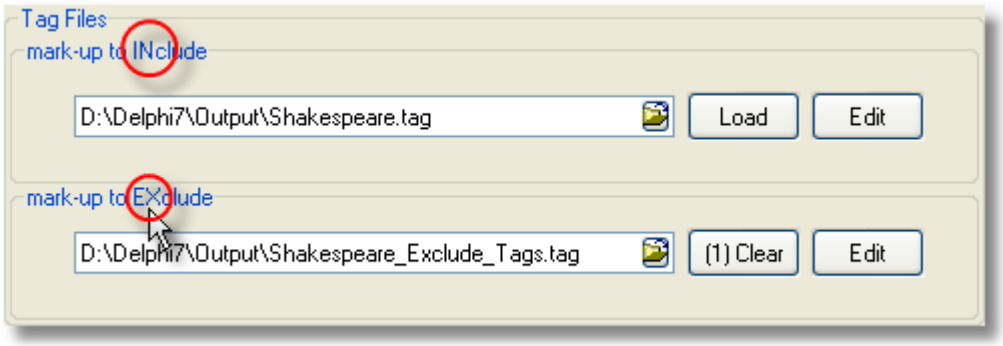


Markup to INclude or EXclude



See Making a Tag File 82.

Entity file

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See Making a Tag File 82.

Text Files and Mark-up

However, you can get **WordSmith** to use tags to select one section of a text and ignore the rest. This is "selecting within texts". You can also select *between* texts: that is, get **WordSmith** to look within the start of each text to see whether it meets certain criteria.

These functions are available from *Settings* | *Adjust Settings* | *Tags* | *Only If Containing* 79 *or* *Only Part of File* 81.

Document Header

If you simply want to cut out a document header (a repeated header containing copyright notices as is found at the start of every BNC text), you just ensure that some suitable tag is specified as above in the **`</teiHeader>`** example. (If you choose Custom Settings above, you will get suitable choices automatically.)

For more complex searches, you might want to choose the Only If Containing 79 or Only Part of File 81 buttons visible above.

The order in which these choices are handled

If you choose either to select either between or within texts, WordSmith will check that each text file meets your requirements, before doing your concordance, word list, etc. It will

1. Select between files 79 to check whether it contains the words you've specified;
2. Cut out any section specified as a "section to cut 81";
3. If there are "sections to keep 81", cut out everything which is not within them;
4. Cut start of each line 81, if applicable;
5. Process any entity references you want to translate 76;
6. Ignore 76 any tags not to be retained (see the "Mark-up to ignore" section of the screenshot above).

See also: Overview of Tags 76, Making a Tag File 82, Tag Handling 76, Tag Concordancing 112, Showing Nearest Tags in Concord 119, Viewing the Tags 256, Types of Tag 85, Guide to handling the BNC

6.4 only if containing...

The point of it

You might want to process only the speech of elderly men, or only advertising material, or only classroom dialogues. This function allows WordSmith to search through each text, e.g. in text headers, ensuring that you get the right text files and skip any irrelevant ones.

Suppose you have a large collection of texts (e.g. the British National Corpus) and you cannot

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remember which of them contain English spoken by elderly men.

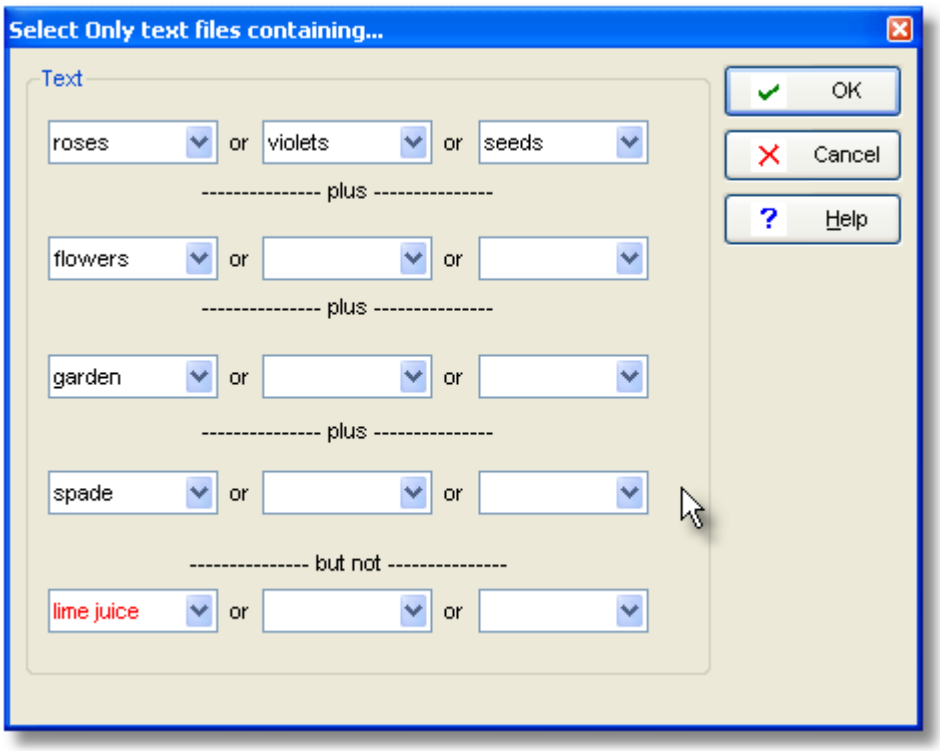
Knowing that the BNC uses **stext>** for spoken texts, **sex=m** for males, **age=5** for speakers aged 60 or more, you can get WordSmith to filter your text selection. It will search through the whole of every text file (not just the tags or header sections, in fact the first 2 megabytes 276 of the file) to check that it meets your requirements.

You can specify up to 15 tags, each up to 80 characters in length. They will be case sensitive (i.e. you will get nothing if you type **Age=5** by mistake).

Horizontally, the options represent combinations linked by "or". Vertically, the combinations are "and" links. The bottom set represents "but not" combinations.

After your text files have been processed, you will be able to see which met your requirements in the Text File choose window 31 and can save the list for later use as favourites 29.

Examples:



You only want text files which contain either **roses** or **violets** or **seeds**, and **flowers** must be present too, so must **garden** and **spade** But you do not want **lime juice** to be present in the text.

If you want **book** or **hotel** but only if they're not in a text file containing **publish** or **Booker Prize**: write **book** into the first box, **hotel** in the box beside it, and **publish*** and **Booker *** in the first two boxes in the bottom row.

See also: Tags as Selectors 77, Selecting within texts 81, Extracting text sections 221, Filtering your text files 231 using Text Converter 220, Guide to handling the BNC

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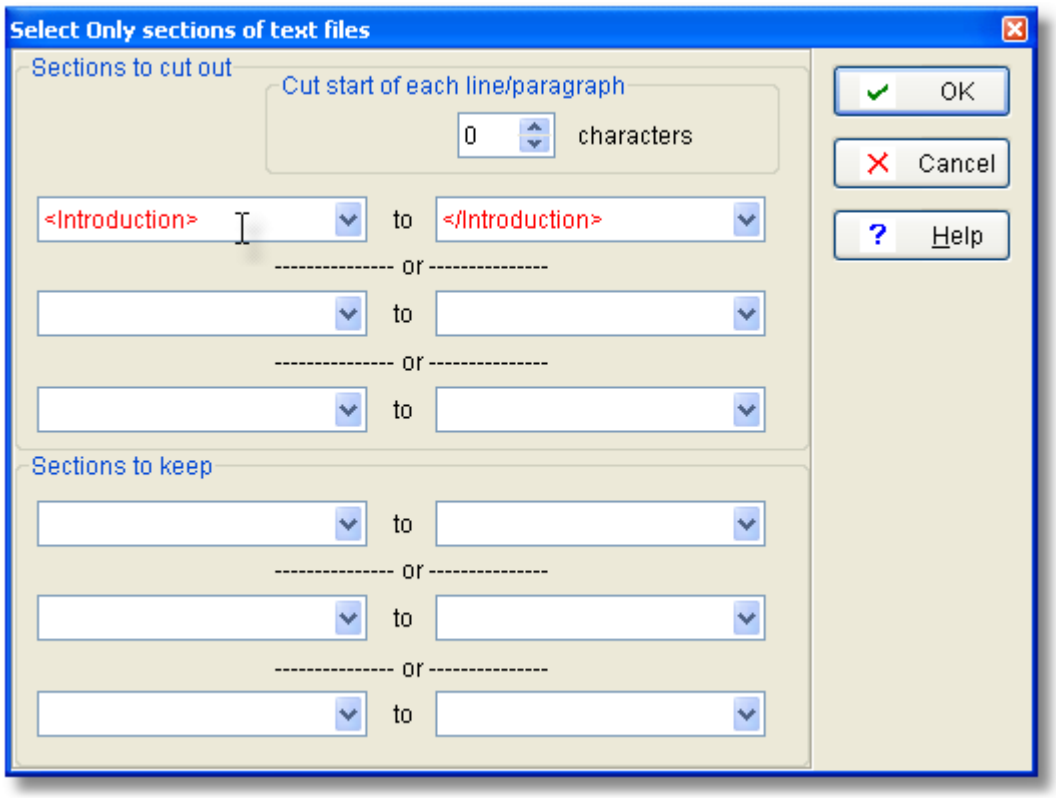
6.5 part of file:selecting within texts



Cut start of each line/paragraph

The point of this is that some corpora (e.g. LOB) have a fixed number of line-detail codings at the start of each line. Here you want to cut them out (that is, after every <Enter>). Choose the number of characters to cut, up to 100; the default is 0. Use **-1** if you want to cut everything up to the first alphabetical character at the start of each line, and **-2** to cut everything up to the first tab.

Sections to Cut

If you are using text files with SGML, XML or HTML 274 headers (e.g. the British National Corpus) you may simply want to cut out the header from your word lists, concordances, etc. as shown in the Document header example 77.

For more complex choices, you may here specify what is to be cut, where it starts (for example **<Introduction>**) and where you want to cut to (e.g. **</Introduction>**). You can choose to cut out up to 3 different and separate sections (**<HEAD>** to **</HEAD>** or **<BODY>** to **</BODY>**). This function is case-sensitive and cuts out any section located as many times as it is found within the whole text.

Sections to Keep (contexts)

You want to select one section of a text and cut out the rest. Specify one tag to define the desired start, and one to specify the end, e.g. **<Intro>** to **<Body>**

(these would analyse only text introductions), or **<Mary>** to **</Mary>** (these would get all of Mary's contributions in the discourse but nothing else).

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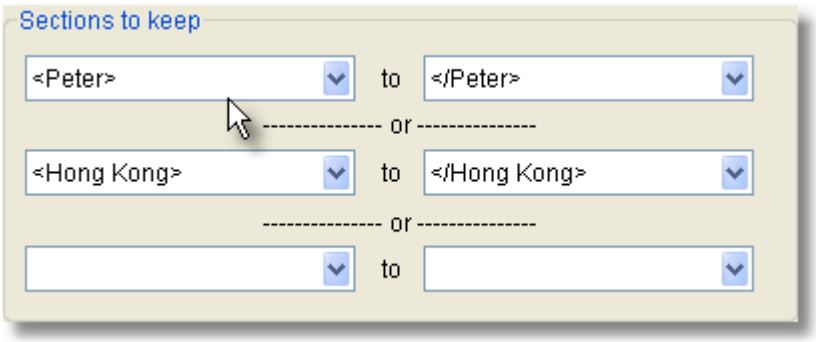
Naturally you must be sure that there is something unique like a **<** or **>** symbol to define each section. This function is case sensitive (so it would not find **<MARY>**).

If you used **<H1>** to **</H1>** with this function in HTML 274 text you'd get all the major headings in your texts, however many, but nothing else.

You can choose to use 2 different sections, e.g. **<Intro>** to **</Intro>** to get the introduction and **<Conclusion>** to **</Conclusion>** to get the conclusion as well. The "off" switch doesn't have to look like the "on" switch -- you could keep, for example, **<INTRO>** to **</BODY>** and thereby cut out the conclusion if that comes after the **</BODY>**.



In this example, all the **Peter** section and all the **Hong Kong** sections will be used for the word-list, concordance etc., but nothing else.

See also: Tags as Selectors 77, Only if containing <x> 79, Guide to handling the BNC.

6.6 making a tag file

Tag Syntax

Each tag is case sensitive.

Tags conventionally begin with **<** and end with **>** but the first & last characters of the tag can be any symbol.

You can use

***** to mean any sequence of characters;
? to mean any one character;
to mean any numerical digit.

Don't use **[** to insert comments in a tag file, since **[** is useful as a potential tag symbol. You can use # to represent a number (e.g. **<h#>** will pick up **<h5>, <h1>**, etc.). And use **?** to represent any single character (**<?>** will pick up **<s>, <p>**, etc.), or * to represent any number of characters (e.g. **<u*>** will pick up **<u who=Fred>, <u who=Mariana>**, etc.). Otherwise, prepare your tag list file in the same way as for Stop Lists 70.

Use **notepad** or any other plain text editor, to create a new **.tag** file. Write one entry on each line.

Any number of pre-defined tags can be stored. But the more you use, the more work WordSmith has to do, of course and it will take time & memory ...

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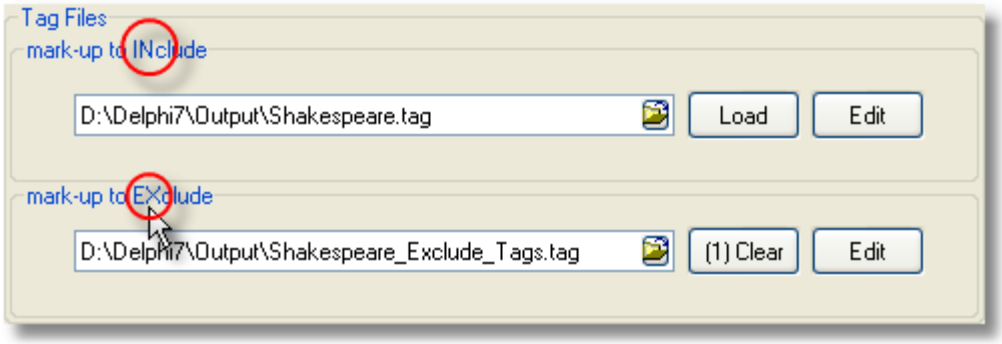
Mark-up to EXclude



A tag file for stretches of mark-up like this **<SCENE>A public library in London. A bald-headed man is sitting reading the News of the World.</SCENE>** where you want to exclude the whole stretch above from your concordance or word list, e.g. because you're processing a play and want only the actors' words. Mark-up to exclude will cut out the whole string from the opening to the closing tag inclusive.

The syntax requires **></** or **>*</** to be present.

Legal syntax examples would be:

<SCENE></SCENE>
<SCENE>*</SCENE>
<SCENE #>*</SCENE>
<HELLO?? #>*</GOODBYE>

(In this last example it'll cut only if **<HELLO** is followed by 2 characters, a space and a number then **>**, and if **</GOODBYE>** is found beyond that.)

Mark-up to INclude

A tag file for tags to retain contains a simple list of all the tags you want to retain. Sample tag list files for BNC handling (e.g **bnc world.tag**) are included with your installation (in your **Program Files\wsmith5** folder): you could make a new tag file by reading one of them in, altering it, and saving it under a new name.

Tags will by default be displayed in a standard tag colour 36 (default=grey) but you can specify the foreground & background for tags which you want to be displayed differently by putting

/colour="foreground on background"
e.g. **<noun> /colour="yellow on red"**
Available colours:
'Black','White','Cream',
'Red','Maroon',
'Yellow',
'Navy','Blue','Light Blue','Sky Blue',
'Green','Olive','Dollar Green','Grey-Green','Lime',
'Purple','Light Purple',
'Grey','Silver','Light Grey','Dark Grey','Medium Grey'.

The colour names are not case sensitive (though the tags are). Note UK spelling of "grey" and "colour".

Also, you can put "/play media" if you wish a given tag, when found in your text files, to be able to attempt to play a sound or video file 87. For example, with a tag like

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<sound *> /colour="blue on yellow" /play media
and a text occurrence like
<sound c:\windows\Beethoven's 5th Symphony.wav>
or
<sound http://www.political_speeches.com/Mao_Ze_Dung.mp3>
you will be able to choose to hear the .wav or .mp3 file 109.

Finally, you can put in a descriptive label, using /description "label" like this:

```
<w NN*> /description "noun" /colour="Cream on Purple"
<ABSTRACT> /description "section"
<INTRODUCTION> /description "section"
<SECTION 1> /description "section"
```

Section tag

In the examples using "section", Concord's "Nearest Tag" will find the section however remote in the text file it may be.

This is particularly useful e.g. if you want to identify the speech of all characters in a play, and have a list of the characters, and they are marked up appropriately in the text file.

```
<Romeo> /description "section"
<Mercutio> /description "section"
<Benvolio> /description "section"
```

Here is an example of what you see after selecting a tag file and pressing "Load". The first tag is a "play media" tag, as is shown by the icon. You can see the cream on purple colour for nouns too. The tag file (**BNC World.tag**) is included in your installation.

Entity File (entities to be translated)

A tag file for translation of one entity reference into another uses the following syntax: entity reference to be found + space + replacement. For example:

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É É
é é

A sample tag file for translation (**`Program Files\wsmith5\sgmltrns.tag`**) is included with your installation: you could make a new one by reading it in, altering it, and saving it under a new name.

See also: Overview of Tags 76, Handling Tags 76, Showing Nearest Tags in Concord 119, Tag Concordancing 112, Types of Tag 85, Viewing the Tags 256, Using Tags as Text Selectors 77, Guide to handling the BNC.

6.7 tag-types

You will need to specify how each tag type starts and ends, and you should be consistent in usage. Restrict yourself to symbols which otherwise do not appear in your texts.

eight special markers

Eight kinds of marker may be marked as significant for word lists: those which represent starts and ends of headings 86, sections 86, sentences 86 and paragraphs 86. Type these in the appropriate spaces when selecting Text Characteristics 72.

tags within 2 separators 269

These tags are often used to signal the part of speech of each word; they're also widely used in HTML, XML, SGML 274 for "switches", e.g. **`<H1>`** to switch on Heading 1 style and **`</H1>`** to switch it off again. You should use the same opening and closing symbols, usually some kind of brackets, for all your tags (as the British National Corpus World Edition does using SGML 274 markup): **`<Noun>,<Verb>,<Pronoun>`**.

entity references

HTML, XML and SGML 274 use so-called entity references for symbols which are outside the standard alphabet, e.g. **`ét&eacute`** which represents **`été`**.

Specify these two types of markup by choosing Settings/Tag Lists, or Settings/Text Characteristics/Tags. You will then see a dialogue box offering Text to Ignore and a Browse button.

The Tags to Ignore 76 option allows you to specify tags which you do not want to see in the concordance or word list results.

The Tags to be INcluded 82 option allows you to specify a tag file, containing tags which you do want to see in the concordance or word list results.

The Tags to be EXcluded 82 option allows you to specify a different tag file, containing stretches of tags which you want to find and remove in the concordance or word list results.

The Tags to be Translated 76 option allows you to specify entity references which you want to convert on the fly, such as **`&eacute`**.

multimedia markers

Text files can be tagged for reference to sound or video files which you can hear or see. For example, a text might contain something like this: **`blah blah blah ...<a href=http://gandalf.hit.uib.no/c/l/32401-1.mp3> blah blah`** etc. A concordance on **`blah blah`** could pick up the tag so you can hear the source mp3 file. See defining multimedia tags 87.

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See also: Overview of Tags 76, Handling Tags 76, Making a Tag File 82, Showing Nearest Tags in Concord 119, Tag Concordancing 112, Viewing the Tags 256, Using Tags as Text Selectors 77, Concord Sound and Video 109, Guide to handling the BNC.

(A particular sub-variety of tags within 2 separators sometimes used is tags with underscores at the left and space at the right like this

He_PRONOUN entered_VERB the_DET room_NOUN.

To process these, you will need to declare the underscore a valid character 72, or else convert your corpus 230 to a format like.

<PRONOUN>He <VERB>entered <DET>the <NOUN>room.)

6.8 start and end of text segments

WordSmith attempts to recognise 4 types of text segment: sentences, paragraphs, headings, sections. Processing is case sensitive. You can use **<Enter>** and **<Tab>** as strings representing an end of paragraph or a tab in your texts. For sentence ends, **auto** is another option.

Define these in your language settings 30.

Sentences

For example, **<s>** might represent the beginning of a sentence and **</s>** the end. If you leave the choice as **auto**, ends of sentences are determined by full stops or question marks or exclamation marks followed by a capital letter.

Paragraphs

For example, **<p *>** or ** ** might represent the beginning of a paragraph and ** ** the end.

Headings

For example, **<head>** might represent the beginning and **</head>** the end. Note that the British National Corpus marks sentences within headings. Eg.

```
<head>
<s n="2"><w NN1>Introduction
</head>
```

in text **HXL**. It seems odd for the one word **Introduction** to count as a sentence, so WordSmith does not use sentence-tags within headings.

Sections

For example, **<section *>** might represent the beginning and **</section>** the end.

Each of these is counted preferably when its closing tag such as **</s>, ** etc. is encountered. If there are no closing ** ** tags in the entire text then paragraphs will be counted each time the opening paragraph tag is found.

See also: Overview of Tags 76, Handling Tags 76, Showing Nearest Tags in Concord 119, Tag Concordancing 112, Types of Tag 85, Viewing the Tags 256, Using Tags as Text Selectors 77, Guide to handling the BNC.

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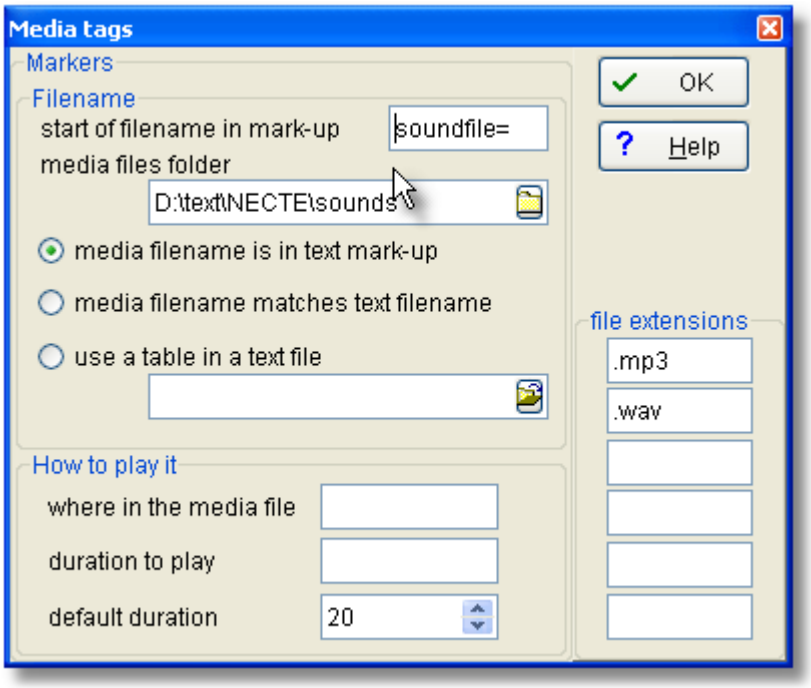
6.9 multimedia tags

In this screenshot you see an example of how to define your multimedia tags. This is accessed from *Adjust Settings* | *Tags* | *Media Tags*.



File Extensions

The file extensions (**.wav, .mp3** etc.) define the file types which your computer can play. Of course this function does require your computer to be able to handle sound or video if it is to work -- Windows uses the file extension to know how to play it.

Filename

The sound or video filename might be

1. specified in a tag
2. the same name as the text filename but with another extension such as **.wav**
3. found in the tag and interpreted using a table you have created previously. To do this, make each line like this:

<s1>=c:\my_corpus_sounds\angry_man.wav 560 2
<s2>=c:\my_corpus_sounds\happy_little_girl.mp3 980 2

where each line has the tag found in the text file, followed by **=** then the desired value.

If it is in the tag mark-up, to process a reference like **<a href=http://gandalf.hit.uib.no/c/l/32401-1.mp3>** in the source text, the **=** character is sufficient to define where the start of the filename begins. In this case, what follows **=** is a web address. For a text containing tags like this **<sound$$C:\mysounds\talk.wav>**, you'd put **$$** to show the start of filename. For the concordance example 109, **soundfile=** is adequate to identify where the filename begins.

The *media files folder* will be needed (for cases 1 and 2 above) if the sound files are not stored in

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the same folder as your text files.

How to play it

Duration to play and where to start playing are measured in seconds.

You can indicate markers for start and duration if necessary. They would be needed if your tag contained e.g.

<a href=http://gandalf.hit.uib.no/c/l/32401-1.mp3 start=0360 play=5>

If so, you'd specify duration to play as **play=** and where in the media file as **start=**

You can specify a default duration as in the screenshot: 20 seconds. As much as this may be needed especially if the sound tags are not spaced closely together in the text file.

If no start or duration indication is given, the whole sound or video file will be played.

If there are no duration and start position markers, the first number will be interpreted as start position and the second as duration, so a tag like this: **<sound$$C:\mysounds\talk.wav 15 5>** in your text file means "play c:\mysounds\talk.wav starting 15 seconds from the beginning and play for 5 seconds".

defaults

The defaults are: play **.mp3** and **.wav** files. Once you've completed this, save your defaults 65 for next time.

See also: Sound and Video in Concord 109, Overview of Tags 76, Making a Tag File 82, Tag Handling 76, Tag Concordancing 112,

Showing Nearest Tags in Concord 119, Viewing the Tags 256, Types of Tag 85, Guide to handling the BNC

6.10 modify source texts

The point of it...

This function enables you to modify your original source texts as a result of concordance work you've done. In this way, your work can get saved in the source texts themselves. For example, you might want to save user-defined categories, or search-phrase results where you have decided a phrase is a multi-word unit.

Note: this procedure does alter your source texts. Before each is altered for the very first time, it is backed up (original filename with **.original** extension) but any change to your source texts or corpora must be done with caution!

User-defined categories

For example, suppose you have marked your concordance lines like this:

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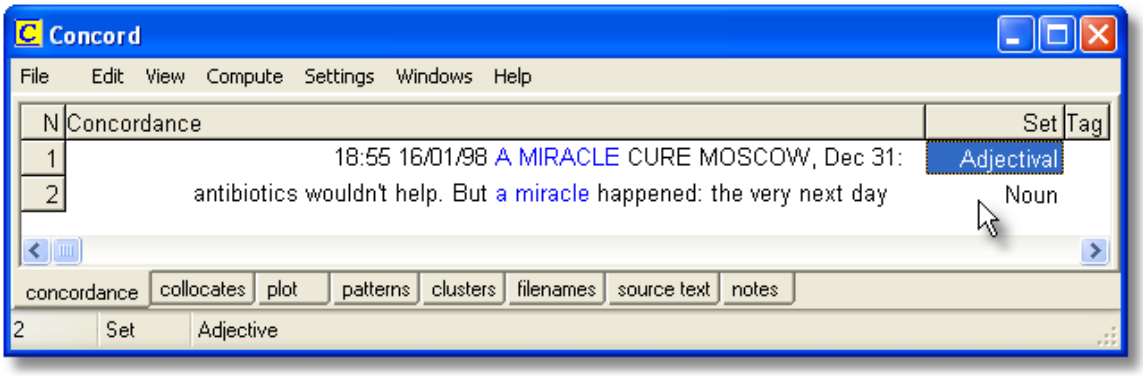
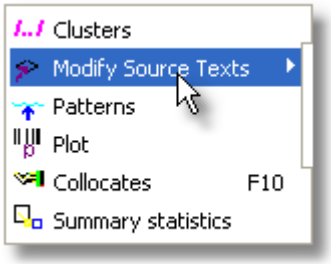
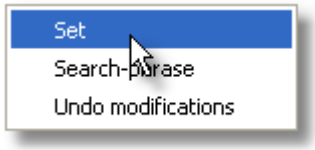


where the first line with **miracle** pre-modifies the noun **cure** and is marked **Adjectival** but the second is an ordinary noun, and wish to save this in your original source text files.

How to do it

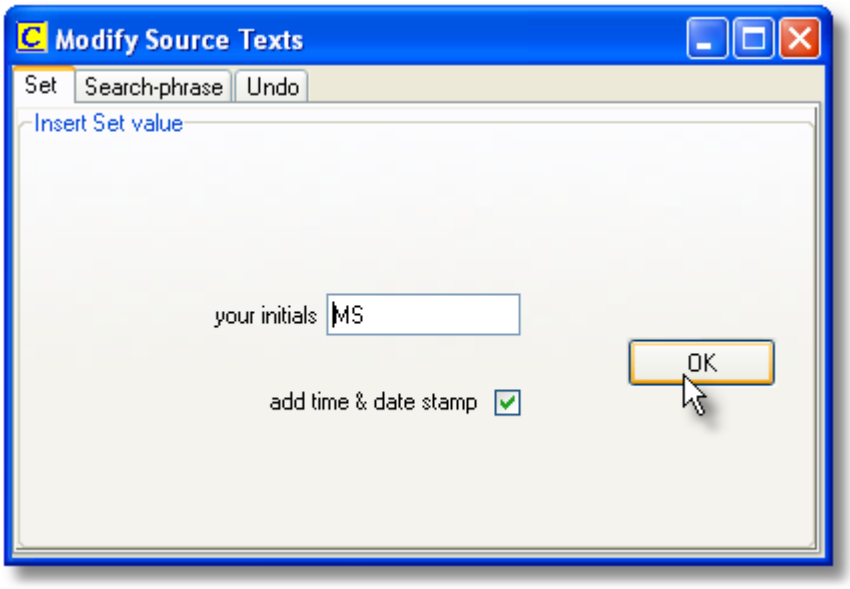
Choose *Compute* | *Modify Source Texts*.





and

and if you want to save the Set choices, answer Yes here:



and the set choices will be marked as in this example:

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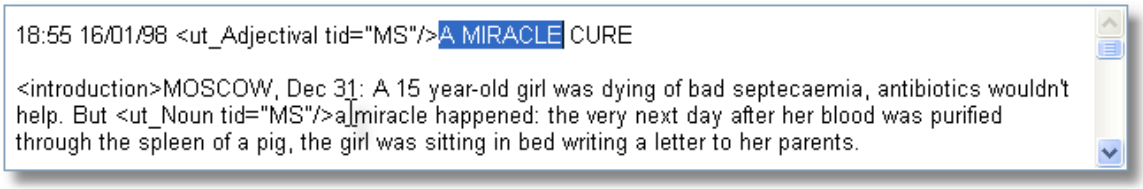
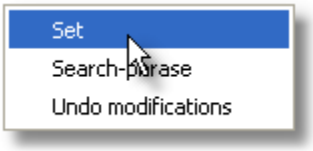


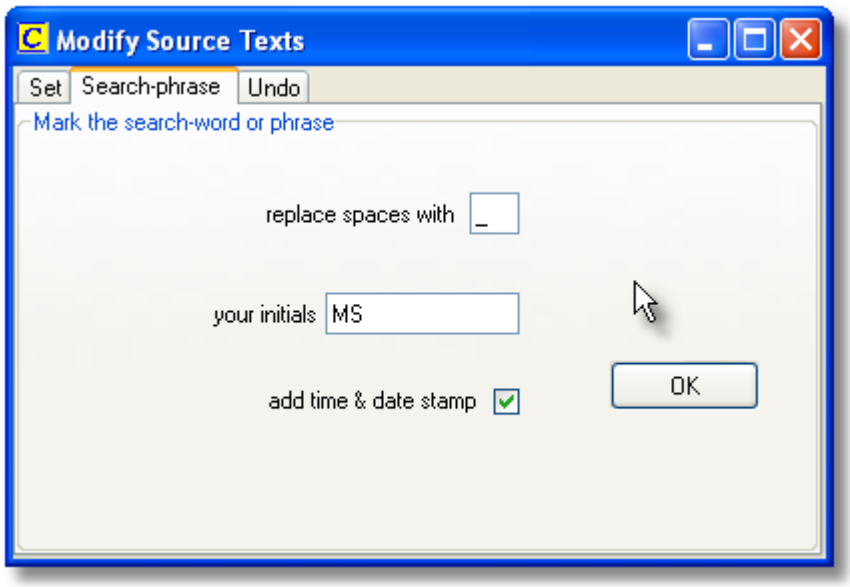
(seen by double-clicking the concordance line to show the source text).

Multi-word unit search phrase

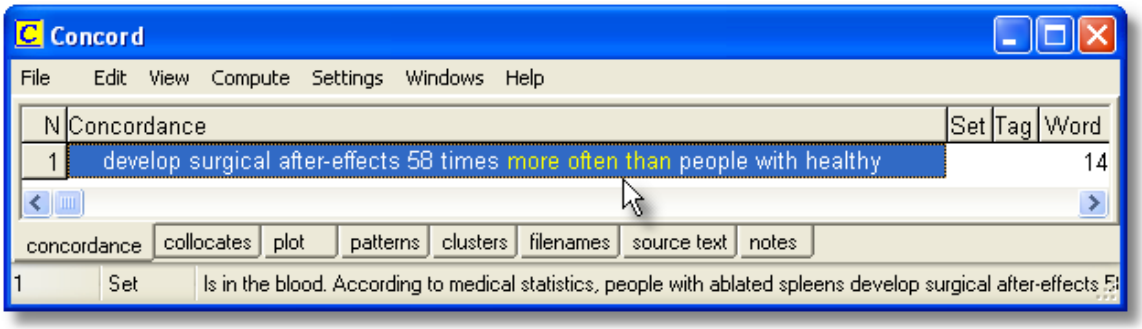
Alternatively if you choose the search-phrase option:



and



then any search word containing a space will have underscores (or whatever other character you choose above) in it to establish multi-word units:



Here, the search word or phrase was **`Rio de Janeiro`**, and the result of modifying the source

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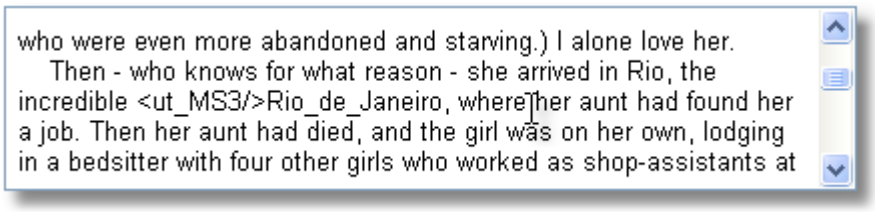
texts was this:



Add Time & Date stamp option

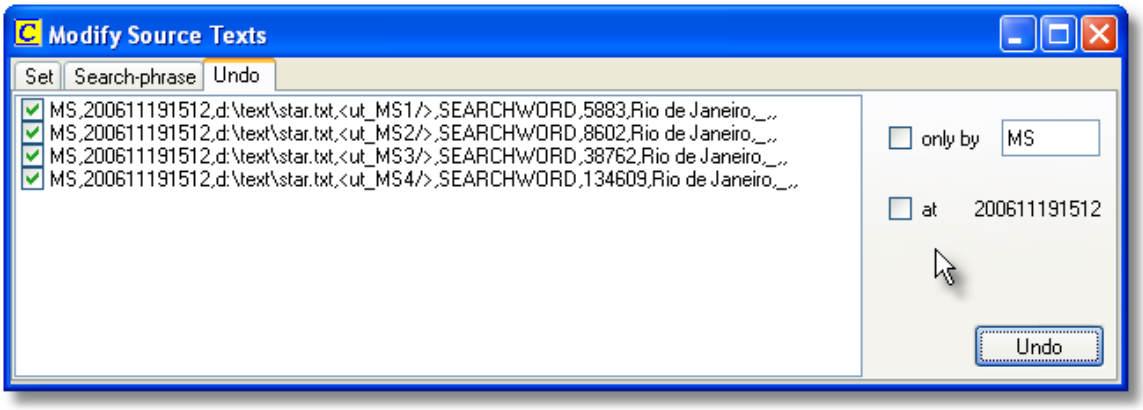
This keeps a log of all your changes, enabling the changes to be undone later.

Initials option

Adds your initials to the changes. The **<ut_MS3/>** tag above means a user whose initials were **MS** made this change and it was the 3rd change.

To undo previous changes

If you have used the "time and date stamp" option shown above, you will be able to undo the modifications. The undo window shows all your log. You can choose all those done on a certain day, or by the person whose initials are visible at the right. Here we see the 4 modifications changing **Rio de Janeiro** into **Rio_de_Janeiro**.



See also: user-defined categories 95

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WordSmith Tools

Concord

7 Concord

7.1 purpose

Concord is a program which makes a concordance 94 using DOS, Text Only, ASCII or ANSI text files.
To use it you will specify a search word 129, which Concord will seek in all the text files you have chosen. It will then present a concordance display, and give you access to information about collocates of the search word, dispersion plots showing where the search word came in each file, cluster analyses showing repeated clusters of words (phrases) etc.

The point of it…

The point of a concordance is to be able to see lots of examples of a word or phrase, in their contexts. You get a much better idea of the use of a word by seeing lots of examples of it, and it's by seeing or hearing new words in context lots of times that you come to grasp the meaning of most of the words in your native language. It's by seeing the contexts that you get a better idea about how to use the new word yourself. A dictionary can tell you the meanings but it's not much good at showing you how to use the word.
Language students can use a concordancer to find out how to use a word or phrase, or to find out which other words belong with a word they want to use. For example, it's through using a concordancer that you could find out that in academic writing, a *paper* can *describe*, *claim*, or *show*, though it doesn't *believe* or *want* (**this paper wants to prove that* ...).

Language teachers can use the concordancer to find similar patterns so as to help their students. They can also use Concord to help produce vocabulary exercises, by choosing two or three search-words, blanking 94 them out, then printing 60.

Researchers can use a concordancer, for example when searching through a database of hospital accident records, to see whether *fracture* is associated with *fall*, *grease*, *ladder*. Or to examine historical documents to find all the references to land ownership.

7.2 index

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see also : WordSmith Main Index 2

7.3 what is a concordance

a set of examples of a given word or phrase, showing the context. A concordance of *give* might look like this:

```
... could not give me the time ...
... Rosemary, give me another ...
... would not give much for that ...
```

A concordancer searches through a text or a group of texts and then shows the concordance as output. This can be saved, printed, etc.

7.4 blanking

In a concordance, to blank out the search-words with asterisks, just press the spacebar (or choose *View* | *Blanked out*). Press it again to restore them.

The point of it…

A blanked-out concordance is useful when you want to create an exercise. This one has *give* and *put* mingled:

```
... could not ********** me the time ...
... Rosemary, ********** me another ...
... would not ********** much for that ...
... could not ********** up with him ...
... so you'll ********** him a present ...
... will soon ********** up smoking ...
... he should ********** it over here ...
```

Concord will give equal space to the blanks so that the size of the blank doesn't give the game away.

See also : Hide tags and other main Controller settings for Concord 133

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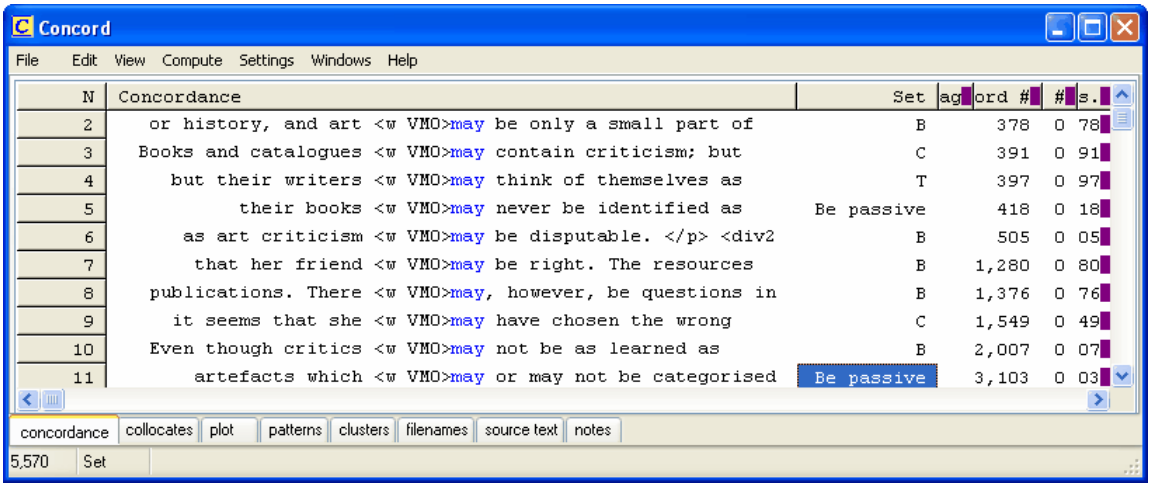
7.5 categories

The point of it…

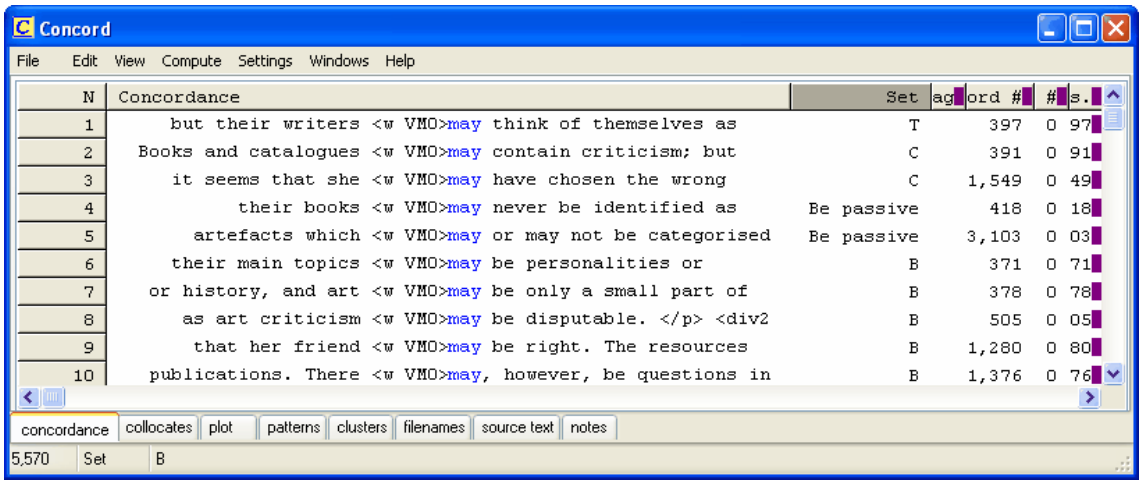
You may want to classify entries in your own way, e.g. separating adjectival uses from nominal ones, or sorting according to different meanings.



Here the user has used **B** where the verb following **may** is the verb **BE** but has also distinguished between **BE** as main verb and AUX **BE** in passive constructions, other verbs being classified according to their initial letter.

If you simply press a letter or number key while the edit v. set v. type-in 270 mode is on Set (as it is in the screenshot above) you will get the concordance line marked with that letter or number in the Set column.
If you want to type something longer, double-click the set column and you'll get a chance to type more.
To correct a mistake, press the zero key.

You can later sort 124 the concordance lines using these categories as shown here, simply by clicking on the header *Set*.



See also : modify your source texts 88, edit v. type-in 270 mode.

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7.6 collocate horizons

The collocate horizons represent the number of collocates Concord will find to the left and right of your search word, and the distance used by **KeyWords** in searching out plot-links 147. The default 65 is 5,5 (5 to left and 5 to right) but you can go up to 25 on either side.
To set collocation horizons and other **Concord** settings, in the main **WordSmith** Controller 4 menu at the top, choose *Adjust Settings*, then *Concord*.

See also: Collocate Settings 96

7.7 collocate settings

To set collocation horizons and other **Concord** settings, in the main **WordSmith** Controller 4 menu at the top, choose *Adjust Settings*, then *Concord*.

Collocates are computed case-insensitively (so **my** in the concordance line will be treated like **My**).
If you don't want certain collocates such as **THE** to be included, use a stop-list 70.

Minimum Specifications

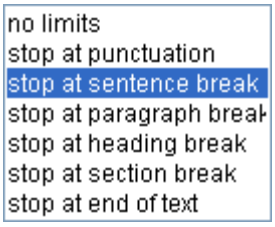
The minimum length is 1, and minimum frequency is 1 (default is 10). You can specify here how frequently it must have appeared in the neighbourhood of the Search Word. Words which only come once or twice are less likely to be informative. So specifying 5 will only show a collocate which comes 5 or more times in the neighbouring context.
Similarly, you can specify how long a collocate must be for it to be stored in memory, e.g. 3 letters or more would be 3.

Horizons

Here you specify how many words to left and right of the Search Word are to be included in the collocation search: the size of the "neighbourhood" referred to above. The maximum is 25 left and 25 right. Results will later show you these in separate columns so you can examine exactly how many times a given collocate cropped up say 3 words to the left of your Search Word.
The most frequent will be signalled in the *most frequent collocate colour* 36 (default=**red**).

Breaks

These are



which you will see in the bottom right corner of the screen visible in the Controller Concord Settings 133.
When the collocates are computed, if the setting is to stop at sentence breaks, collocates will be counted within the above horizons but taking sentence breaks into account.

For example, if a conconcordance line contains

source, per pointing integration times, respectively. However, when we

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compared these two maps

and the search-word is **however**,
only
when we compared these two
will be used for collocates because there is a sentence break to the left of the search word. If the setting is "stop at punctuation", then nothing will come into the collocate list for that line (because there is a more major break than punctuation to the left of it, and no word to the right of the search-word before a punctuation symbol.

7.8 collocate highlighting in concordance

The point of it...

The idea is to be able to see a selected collocate highlighted in the concordance. In this example, the texts were Shakespeare plays and search word was **love**. One of the collocates is **know**, occurring a total of 50 times, with the most frequent at position 4 words to the left of **love**.

N	Word	Total	tal Left	al Right	L5	L4	L3	L2	L1	Centre	R1	R2	R3	R4	R5
53	KNOW	50	33	17	9	14	2	7	1	0	2	4	1	6	4
54	WHICH	49	14	35	3	0	3	6	2	0	17	2	5	5	6
55	THEY	49	26	23	1	3	7	0	15	0	7	2	1	6	7
56	TRUE	49	35	14	2	5	5	5	18	0	0	2	1	6	5
57	WOULD	46	15	31	4	5	1	1	4	0	2	12	7	8	2

Double-clicking **14** in the L4 column to the right of **know**, we see this in the concordance:

N	Concordance
1	though you know my inwardness and love Is very much unto the prince and
2	Because I know you well and love you well, Leave shall you have to
3	to it his own heart. I know what 'tis to love; And would, as I shall pity, I could
4	in your malice. Sir, I know him, and I love him. Love talks with better
5	can make me know this clearly, I'll love her dearly, ever, ever dearly. If it
6	he taught me how to know a man in love; in which cage of rushes I am sure
7	good brother's fault: I know not why I love this youth; and I have heard you
8	Then plainly know my heart's dear love is set On the fair daughter of rich
9	And, for I know your reverend ages love Security, I'll pawn my victories, all
10	dissemble, Know his gross patchery, love him, feed him, Keep in your bosom;
11	for me, I will drink it. I know you do not love me; for your sisters Have, as I do
12	Cambridge here, You know how apt our love was to accord To furnish him with all
13	proof hath made you know; And as my love is siz'd, my fear is so. Where love is
14	to speak what I do know. You all did love him once, not without cause: What

We have brought to the top of the concordance those lines which contain **know** in position L4.

How to do it

In a collocates window or a patterns window, simply double-click the item you wish to highlight. Or select it and choose *View* | *Highlight selected collocate*.

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In the collocates window, if you click

	what you get
the Word column or the Total column	all instances of the word
Total Left	those to the left (33 in the case of **know** above)
Total Right	those to the right (17)
otherwise	those in that column only

To get rid

Re-sort 124 in a different way or choose the menu item *View* | *Refresh*.

7.9 collocates display

The point of it...

The point of all this is to work out characteristic lexical patterns by finding out which "friends" words typically hang out with. It can be hard to see overall trends in your concordance lines, especially if there are lots of them. By examining collocations in this way you can see common lexical and grammatical patterns of co-occurrence. Collocational linkages which involve grammatical items are often referred to as *colligation*.

Display

The collocation display initially shows the collocates in frequency order.

Beside each word and the search-word which the concordance was based on, you'll see the strength of relationship 175 between the two (or 0.000 if it hasn't yet been computed).
Then, the total number of times it co-occurred with the search word in your concordance, and a total for Left and Right of the search-word. Then a detailed break-down, showing how many times it cropped up 5 words to the left, 4 words to the left, and so on up to 5 words to the right. The centre position (where the search word came) is shown with an asterisk.

The number of words to left and right depends on the collocation horizons 96.
The numbers are:

the total number of times the word was found in the neighbourhood of the search word
the total number of times it came to the left of the search-word
the total number of times it came to the right of the search-word
a set of individual frequencies to the left of the search word (5L, i.e. 5 words to the left, 4L .. 1L)
a Centre column, representing the search-word
a set of individual frequencies to the right of the search word (1R, 2R, etc.)

The number of columns will depend on the collocation word horizons. With 5,5 you'll get five columns to the left and 5 to the right of the search word. So you can see exactly how many times each word was found in the general neighbourhood of the search word and how many times it was found exactly 1 word to the left or 4 words to the right, for example.
The most frequent will be signalled in *most frequent collocate colour* 36 (default=**red**). In the screenshot below, **differences** comes 44 times in total but **39** of these are in position L1.

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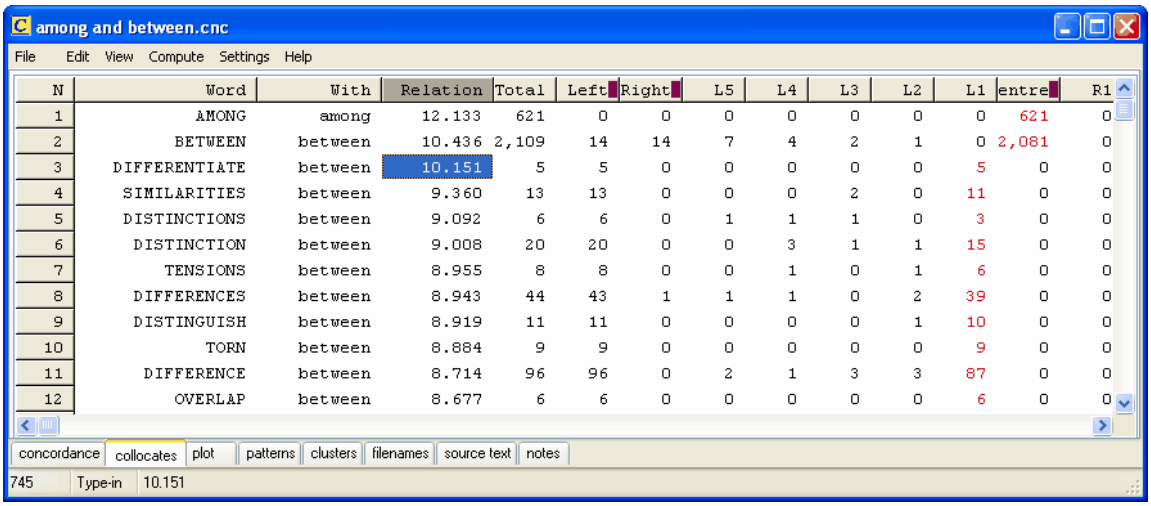
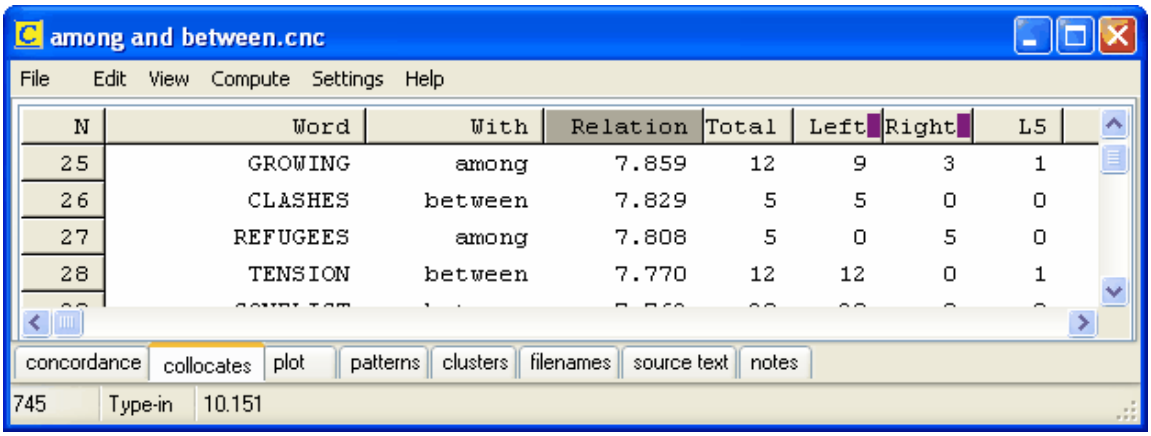


N	Word	With	Relation	Total	Left	Right	L5	L4	L3	L2	L1	entre	R1
1	AMONG	among	12.133	621	0	0	0	0	0	0	0	621	0
2	BETWEEN	between	10.436	2,109	14	14	7	4	2	1	0	2,081	0
3	DIFFERENTIATE	between	10.151	5	5	0	0	0	0	0	5	0	0
4	SIMILARITIES	between	9.360	13	13	0	0	0	2	0	11	0	0
5	DISTINCTIONS	between	9.092	6	6	0	1	1	1	0	3	0	0
6	DISTINCTION	between	9.008	20	20	0	0	3	1	1	15	0	0
7	TENSIONS	between	8.955	8	8	0	0	1	0	1	6	0	0
8	DIFFERENCES	between	8.943	44	43	1	1	1	0	2	39	0	0
9	DISTINGUISH	between	8.919	11	11	0	0	0	0	1	10	0	0
10	TORN	between	8.884	9	9	0	0	0	0	0	9	0	0
11	DIFFERENCE	between	8.714	96	96	0	2	1	3	3	87	0	0
12	OVERLAP	between	8.677	6	6	0	0	0	0	0	6	0	0

The screenshot above shows collocation results for a concordance of **BETWEEN/AMONG** sorted by the *Relation* column, where items like **differentiate, difference** etc. are found to be most strongly related to **between**. Further down the listing, some links concerning **among** (**growing, refugees**) are to be seen.



N	Word	With	Relation	Total	Left	Right	L5
25	GROWING	among	7.859	12	9	3	1
26	CLASHES	between	7.829	5	5	0	0
27	REFUGEES	among	7.808	5	0	5	0
28	TENSION	between	7.770	12	12	0	1

The frequency display can be re-sorted 126 ( ) and you can recalculate the collocates ( ) if you zap 74 entries from the concordance or change the horizons 96.

You can also highlight any given collocate 97 in your concordance display.

See also: Collocation 100, Collocation Relationship 99, Mutual Information 175

7.10 collocation relationship

The point of it...

The idea is to find out how strongly each collocate relates to the search-word near which it was found.

How to compute it

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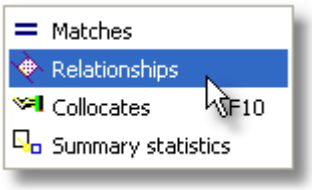
In the Concord menu, choose *Compute* | *Relationships:*



Now choose a word list

The collocation display initially shows the collocates without any relation information (eg. 0.00); this is because to compute the relationship we need to know

a) how often each collocate appears in the corpus we're using,

b) how often the search-word 129 appears in the corpus, and

c) how often they come together within the horizons 96 selected.

The problem is that although b) and c) are known at the time the concordance is computed, a) is not known without doing a concordance or word list for each collocate....

So you are asked to choose an appropriate word list created by WordSmith, which will know the frequencies for each word. It's up to you to choose a word list which actually relates to the concordance you've done!

Full lemma processing, case sensitive

These should be checked if your word list has any lemmatised 165 entries, or it is a case-sensitive word list.

Type of relationship

Choose in the main Controller Concord settings 133 which type of relation you wish to compute. The default is Specific Mutual Information.

Recompute tokens

Choose in the main Controller Index settings 195 whether you want all tokens to be recomputed afresh.

See also: Collocation 100, Collocate display 98, Mutual Information 175

7.11 collocation

What's a "collocate"?

Collocates are the words which occur in the neighbourhood of your search word. Collocates of *letter* might include *post, stamp, envelope*, etc. However, very common words like *the* will also collocate with *letter*.

The point of it…

By examining the collocates you can find out more about "the company the word keeps", which helps to show its meaning and its usage.

Options

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You may compute a concordance with or without collocates: without is slightly quicker and will take up less room on your hard disk. The default is to compute with collocates.
The number of collocates stored will depend on the collocation horizons 96.
You can re-compute collocates after editing your concordance.
If you want to fiter your collocate list, use a match list 57 or stop list 70.
Re-sort 126 a collocate list in a variety of ways.
You can see the strength of relationship 175 between the word and the search-word which the concordance was based on.

Collocates can be viewed 98 after the concordance has been computed.

Technical Note

The literature 262 on collocation has never distinguished very satisfactorily between collocates which we think of as "associated" with a word (letter - stamp) on the one hand, and on the other, the words which do actually co-occur with the word (letter - my, this, a, etc.).
We could call the first type "coherence collocates" and the second "neighbourhood collocates" or "horizon collocates". It has been suggested that to detect coherence collocates is very tricky, as once we start looking beyond a horizon of about 4 or 5 words on either side, we get so many words that there is more noise than signal in the system.

KeyWords allows you to study Associates 139, which are a pointer to "coherence collocates". **Concord** will supply "neighbourhood collocates". **WordList** allows you also to study Mutual Information 175.

See also: collocation display 98, collocation settings 96, collocation relationship 99, mutual information display 178.

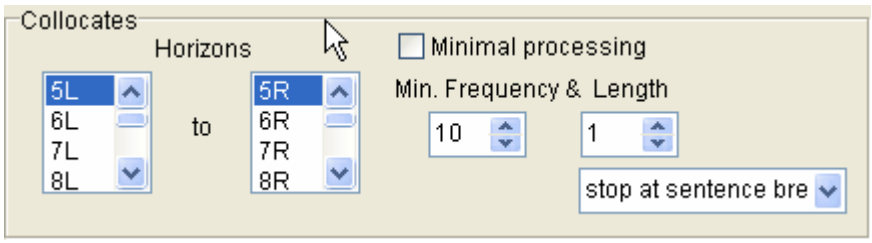
7.12 Concord: clusters

The point of it…

These word clusters help you to see patterns of repeated phraseology in your concordance, especially if you have a concordance with several thousand lines. Naturally, they will usually contain the search-word itself, since they are based on concordance lines.
Another feature in **Concord** which helps you see patterns is Patterns 122.

How it does it…

Clusters are computed automatically if this is not disabled in the main Controller 133 settings for Concord (*Adjust Settings* | *Concord*) where you will see something like this:



where your usual default settings are controlled. "Minimal processing", if checked, means do not compute collocates, clusters, patterns etc. when computing a concordance. (They can always be computed later if the source text files are still present.)

Clusters are sought within these limits: default: 5 words left and right of the search word, but up

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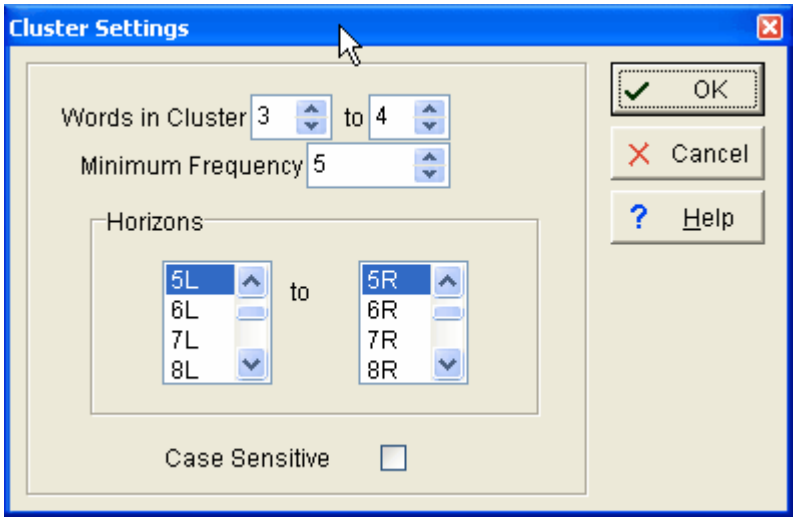
to 25 left and 25 right allowed. The default is for clusters to be three words in length and you can choose how many of each must be found for the results to be worth displaying (say 3 as a minimum frequency).

Clusters are calculated using the existing concordance lines. That is, any line which has not been deleted or zapped is used for computing clusters.

As with WordList index clusters 170, the idea of "stop at sentence breaks" (there are other alternatives) is that a cluster which spans across two sentences is not likely to make sense.

Re-computing clusters (...)

The default clusters computed may not suit, (and you may want to recompute after deleting some lines), so you can also choose *Compute* | *Clusters* (...) in the Concord menu, so as to choose how many words a cluster should have (cluster size 2 to 4 words recommended), and alter the other settings.



When you press OK, clusters will be computed. In this case we have asked for 3- to 5-word clusters and get results like this:

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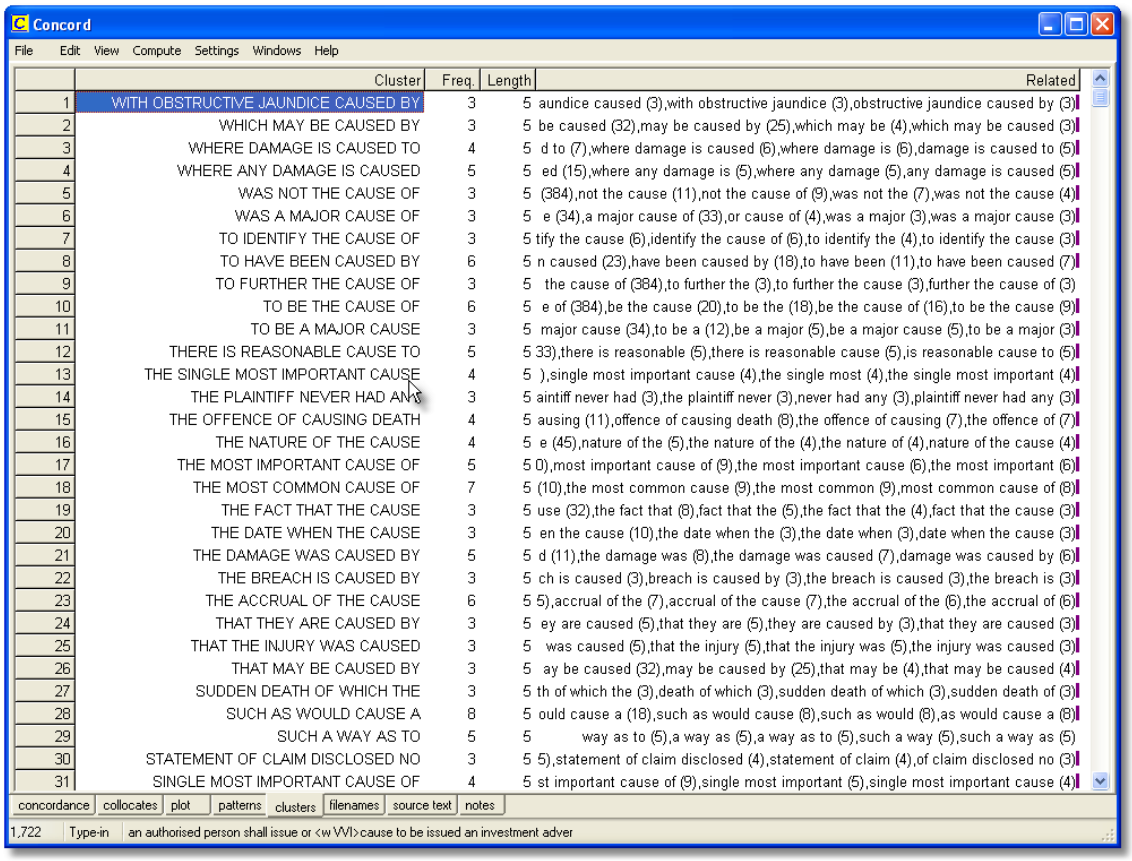

The clusters have been sorted on the Length column so as to bring the 5-word clusters to the top. At the right there is a set of "Related" clusters, and for most of these lines it is impossible to see all of their entries. To solve this problem, double-click any line in the Related column and another window opens. Here is the window showing what clusters are related to the 3-word cluster, **`the cause of`**, which is the most frequent cluster in this set:

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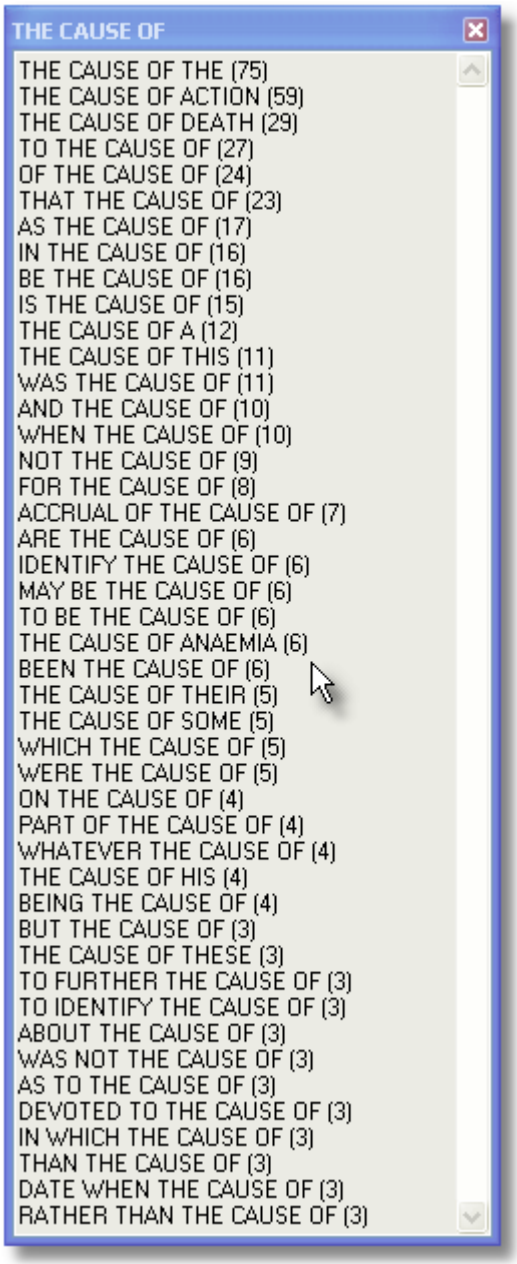

"Related" clusters are those which overlap to some extent with others, so that **`the cause of`** overlaps with **`devoted to the cause of`**, etc. The procedure seeks out cases where the whole of a cluster is found within another cluster.

See also: general information on clusters 285, WordList Clusters 170.

7.13 Concord: dispersion

The point of it…

This shows where the search word occurs in the file which the current entry belongs to. That way you can see where mention is made most of your search word in each file.

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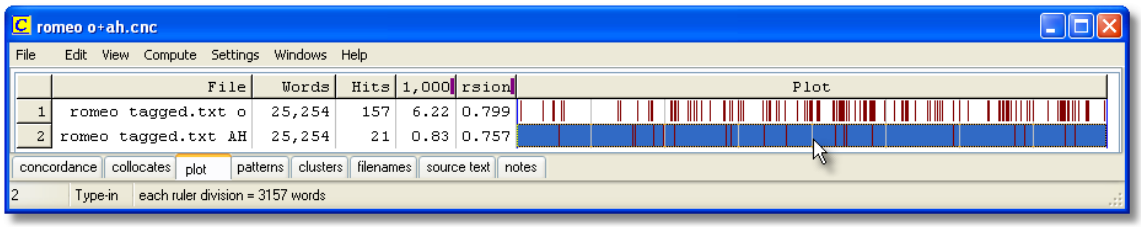
What you see

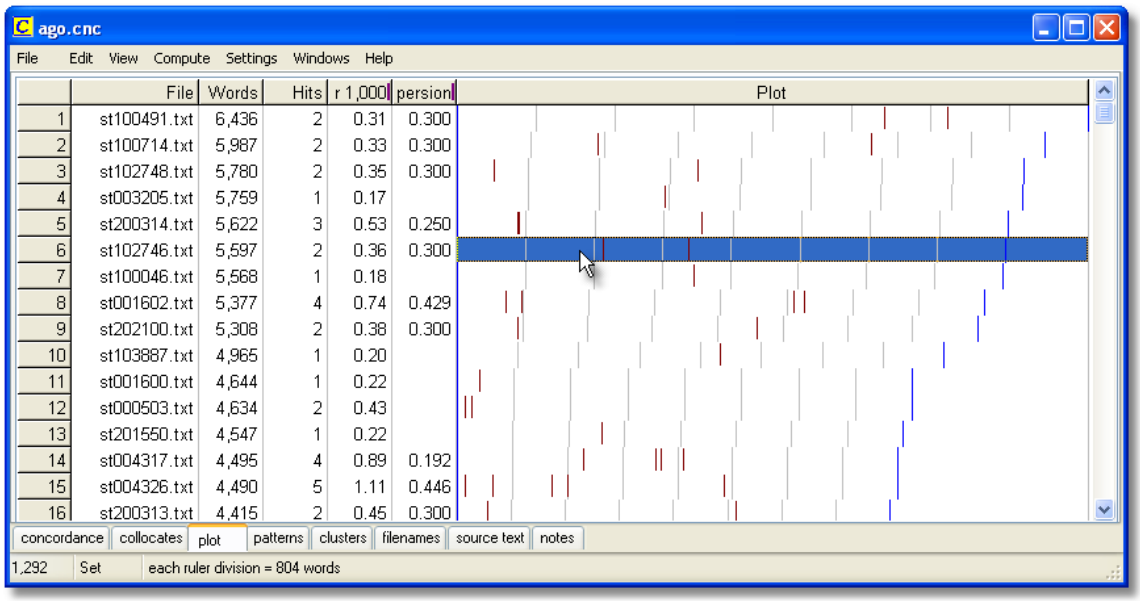
The plot shows:

File source text file-name
Words number of words in the source text
Hits number of occurrences of the search-word
per 1,000 how many occurrences per 1,000 words
Dispersion the plot dispersion value 283
Plot a plot showing where they cropped up, where the left edge of the plot represents "Once upon a time" and the right edge is "happily ever after".



Here we see a plot of "O" and another of "AH" from the play Romeo and Juliet. They are on 2 separate lines because there were 2 search-words. There are more "O" exclamations than "AH"s. There is a "ruler" splitting the display into 8 segments, and the status bar tells us each segment represents about 3150 running words of the play.

The plot is initially sorted 126 by no. of words per 1,000.
There are two ways of viewing the plot, the default, where all plotting rectangles are the same length, or *Uniform Plot* (where the plot rectangles reflect the original file size -- the biggest file is longest). Change this in the *View* menu at the top.



The screenshot shows "uniform plot" -- as the statusbar says, each ruler segment represents 800 words in these dispersion plots of "ago". If you look at the Words column, you will see that the number of words in each file varies, which is why the blue right plot edge and the ruler marks vary in position.

If you don't see as many marks as the number of hits, that'll be because the hits came too close together for the amount of screen space in proportion to your screen resolution. You can stretch the plot by dragging the top right edge of it. You can export the plot using Save As 61 and can get your spreadsheet to make graphs etc, as explained here 61.

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Each plot window is dependent on the concordance from which it was derived. If you close the original concordance down, it will disappear. You can *Print* the plot. There's no *Save* option because the data come from a concordance which you should Save 106, or *Print to File*. You can *Copy* to the clipboard 265 (Ctrl-Ins) and then put it into a word processor as a graphic, using Paste Special.

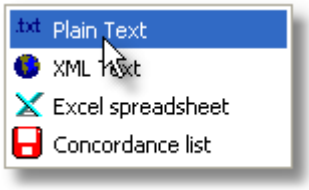
See also: plot and ruler colours 36, plot dispersion value 283.

7.14 Concord: saving and printing

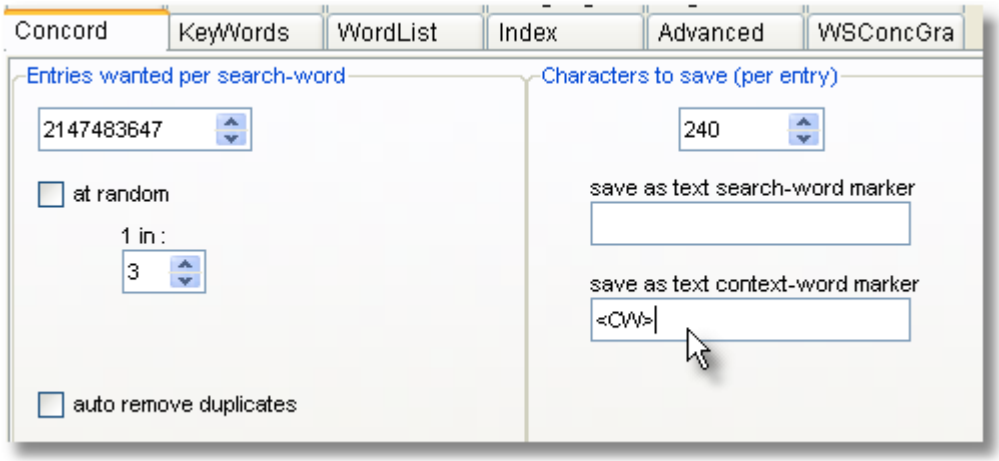
You can save the concordance (and its collocates & other dependent results if these were stored when the concordance was generated) either as a Text File (e.g. for importing into a word processor) or as a file of results which you can subsequently *Open* (in the main menu at the top) to view again at a later date. When you leave **Concord** you'll be prompted to save if you haven't already done so.

Saving a concordance allows you to return later and review collocates, dispersion plots, clusters.

You can Print 52 using the Windows printer attached to your system. You will get a chance to specify the number of pages to print. The font will approximate the one you can see on your screen. If you use a colour printer or one with various shades of grey, the screen colours will be copied to your printer. If it is a black-and-white printer, coloured items will come in *italics* if your printer can do italics.
Concord prints as much of your concordance plus associated details as your printing paper settings allow, the edges being shown in Print Preview 60.



If you choose to save as text using , and if you have (optionally) marked out the search-word and/or context word in the Controller 133 like this



whatever you have put will get inserted in the .txt file. In the above example, doing a search through 23 Dickens texts for **`last night`** with **`drive`** as the context word, a concordance

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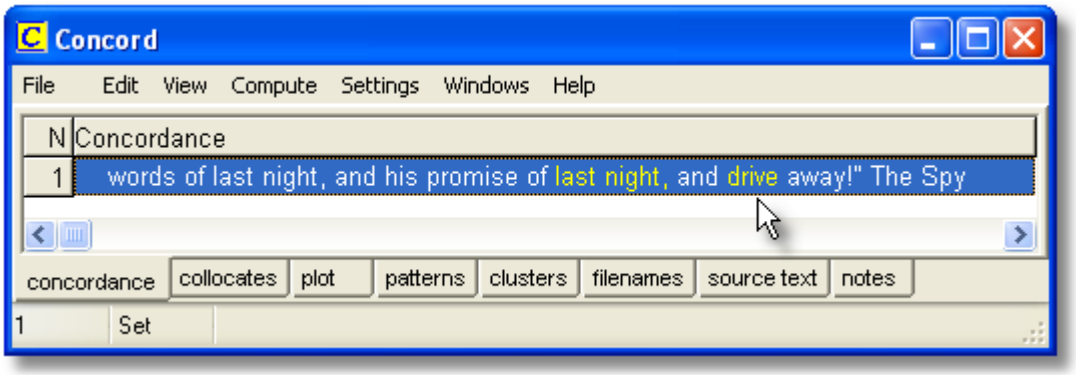
looking like this



produced this in the txt file:

```
rry, tell him yourself to give him no restorative but air, and to
remember my words of last night, and his promise of last night, and
<CW>drive away!" The Spy withdrew, and Carton seated himself at the
table, resting his forehead on his h
```

See also : using the clipboard 265 to get a concordance into Word or another application.

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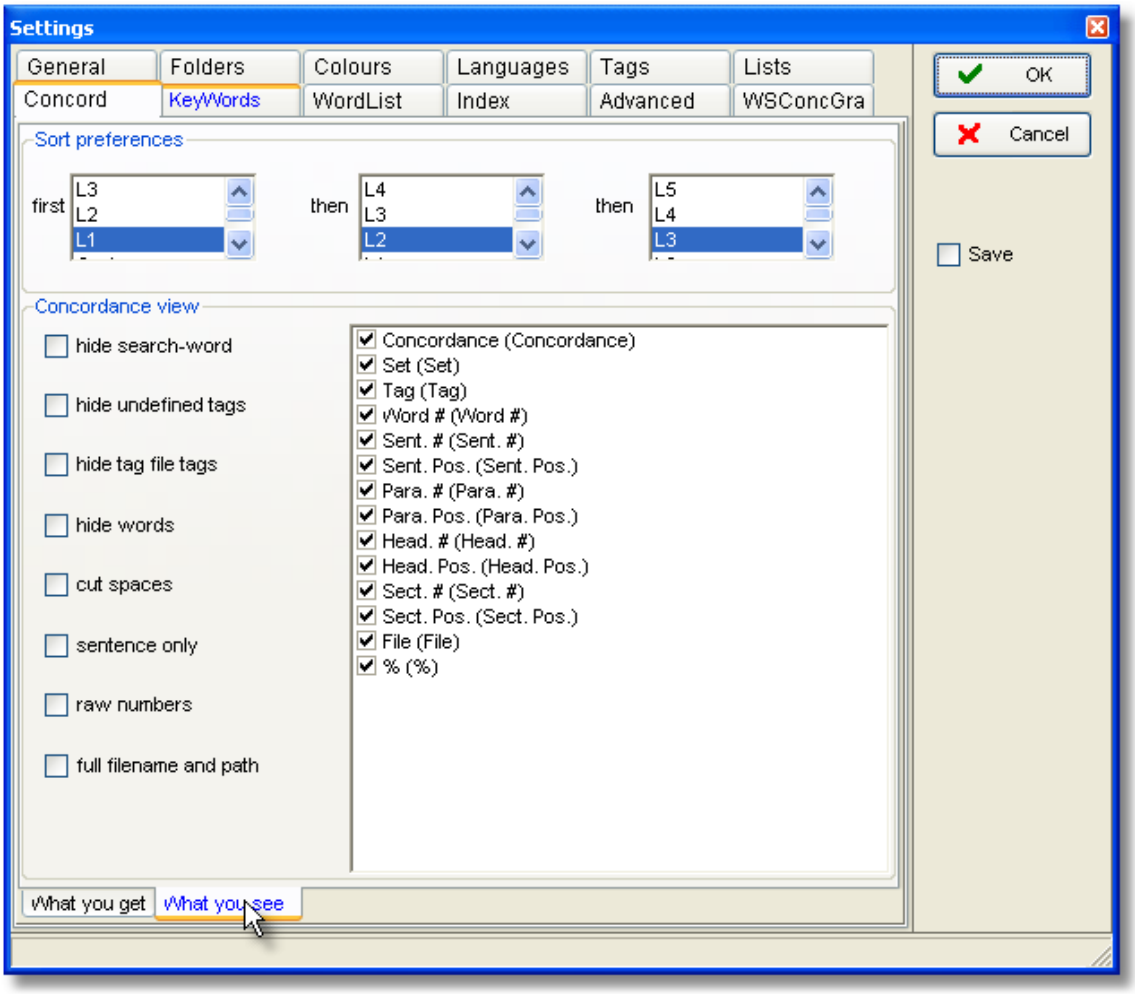
7.15 Concord: viewing options

Access these options in the main Controller, via *Adjust Settings* | *Concord* | *What you see*.



Sort preferences

By default, **Concord** will sort a new concordance in original file order, but you can set this to different values if you like. For further details, see Sorting a Concordance 124.

Concordance View

You can choose different ways of seeing the data, and a whole set of choices as to what columns you want to display for each new concordance. You can re-instate any later if you wish by changing the Layout 54. These menu options toggle on and off. When on, they're checked. They include:

hide search-word = blank it out eg. to make a guess-the-word exercise 94
hide undefined tags = hide those not defined in your tag file 82
hide tag file tags = hide all tags including undefined ones
hide words = show only the tags
cut spaces = remove any double spaces
sentence only = show the context only up to its left and right sentence boundaries 269
raw numbers = show the raw data instead of percentages e.g. for sentence position 132
full filename and path = sometimes you need to see the whole path but usually the filename

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alone will suffice.

See also: showing nearest tags 119, Blanking out 94 the search-word.

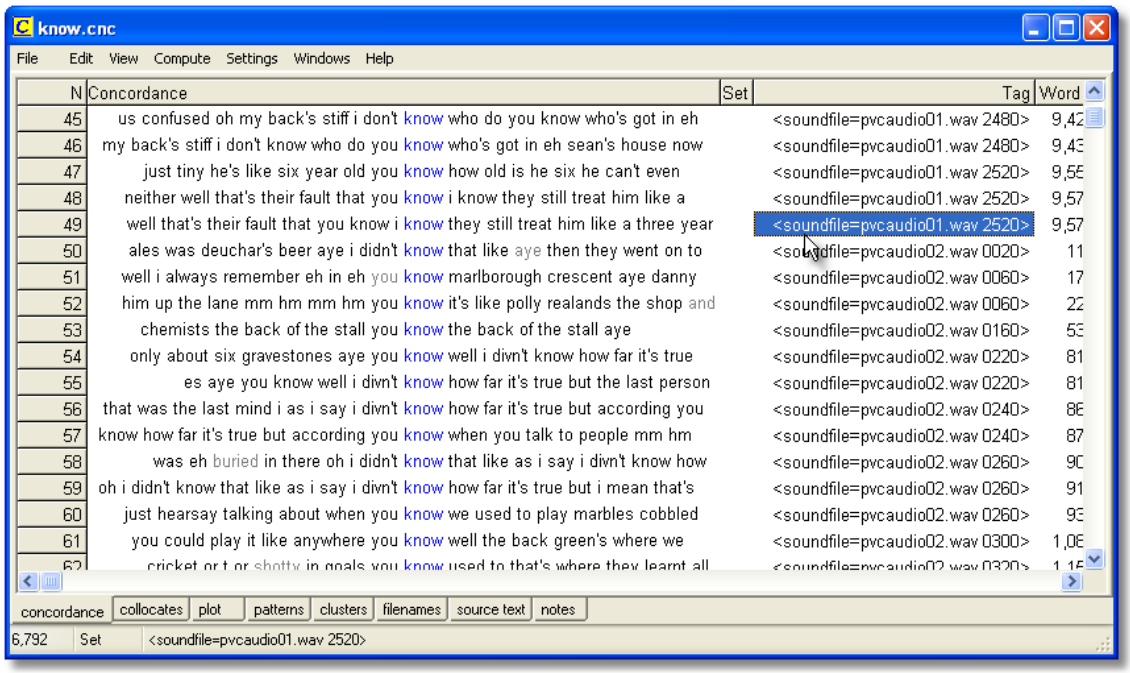
7.16 Concord: handling sounds & video

The point of it

Suppose you do a concordance of "elephant" and want to hear how the word is actually spoken in context. Is the last vowel a schwa? Does the second vowel sound like "i" or "e" or "u" or a schwa?

How to do it...

If you have defined tags which refer to multimedia files, and if there are any such tags in the "tag-context" of a given concordance line, you can hear or see the source multimedia. The tag will be parsed 87 to identify the file needed, if necessary downloading it from a web address, and then played.



In this screenshot we see a concordance where there is a tag inserted periodically in the text file. To play the media file, press Control/M or choose *File* | *Play media file*, or double-click the *Tag* column.

See also: Handling Tags 76, Making a Tag File 82, Showing Nearest Tags in Concord 119, Tag Concordancing 112, Types of Tag 85, Viewing the Tags 256, Using Tags as Text Selectors 77, Tags in WordList 191

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7.17 Concord: what you see and do

You have a listing showing all the concordance lines in a window. You can scroll up and down and left or right with the mouse or with the cursor keys. Click for information on the menu 279.

Sort the lines

If you have a lot of lines you should certainly sort them. A concordance is read vertically, not horizontally. You are looking for repeated patterns, such as the presence of lots of the same sorts of words to the right or left of your search-word. Click the bar at the top to start a search.

The Columns

These show the details for each entry: the entry number, the concordance line, set, tag, word-position (e.g. 1st word in the text is 1), paragraph and sentence position, source text filename 279, and how far into the file it comes (as a percentage). See below for an explanation of the **purple blobs**. The statistics are computed automatically based on the language settings.

Set

This is where you can classify the entries yourself, using any letter, into user-defined categories 95. Supposing you want to sort out verb uses from noun uses, you can press V or N. To type more (eg. "Noun"), double-click the entry in the set column and type what you want. If you have more than one search-word 129, you will find the Set column filled with the seach-word for each entry. To clear the current entry, you can type the number 0. To clear the whole Set column, choose Edit | Clear Set column.

Tag

This column shows the tag context 119.

Want to see more context

Stretching the display to see more

You can pull the concordance display to widen its column. Just place the mouse cursor on the bar between one column and another; when the cursor changes shape

you can pull the whole column.

Stretch one line to see more context

The same applies to each individual row: place the mouse cursor between one row and another in the grey

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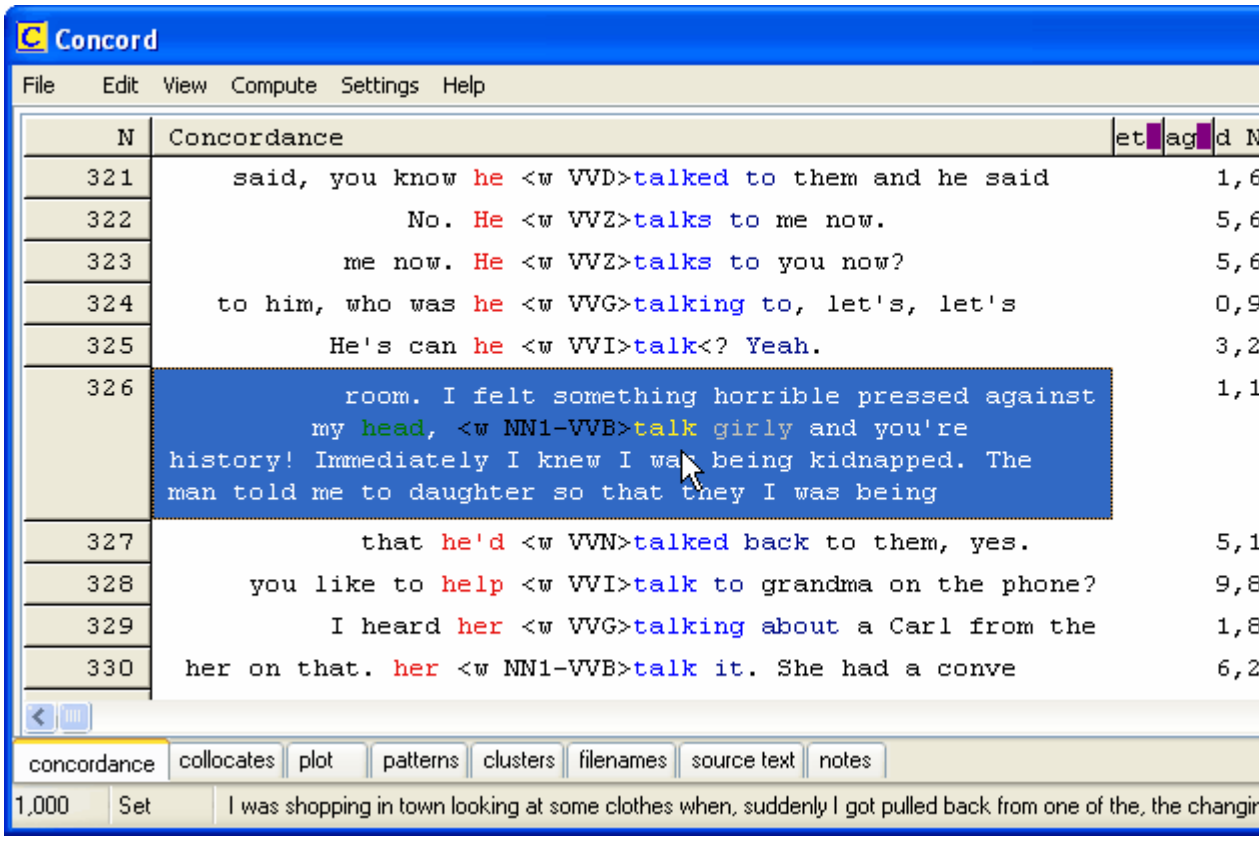
Or press (F8) to "grow" all the rows, or (Ctrl/F8) to shrink them. Or press the numeric key-pad 2 to shrink it.) line as shown below. (Use numeric key-pad 2 to shrink it.)



Viewing the original text-file

(if it is still on the disk where it was when the concordance was originally created)
Double-click the concordance column, and the source text window will load the file and highlight the search word.
Or double-click the filename column, it will open in Notepad for editing.

Other things you may wonder about

Weird purple marks

In the screenshot you will see purple marks where any column is not wide enough to show all the data. The reason is that numbers are often not fully visible and you might otherwise get the wrong impression. For example in the concordance below, the *Word* # column shows **4,569** but the true number might be **14,569**. Pull the column wider and the purple lines disappear.

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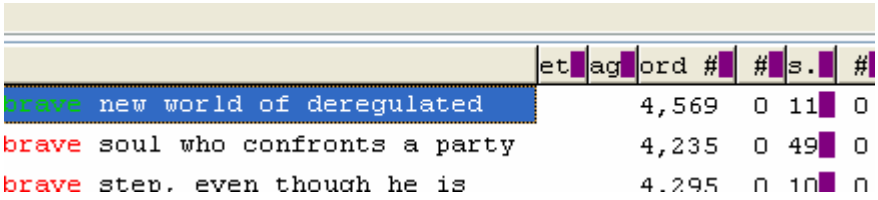

Status bar

The status bar [287] panels show

- the number of entries (1,000 in the "stretch one line" screenshot above)
- whether we're in "Set" or "Edit" mode;
- the current concordance line from its start.

See also:

Re-sorting [124] your concordance lines
Follow-up [117] searches
User-defined categories [95]
Altering the View [108]
Blanking out [94] the search-word
Padding the search-word with spaces (use the search-word padding menu item to put a space on each side of the search-word)
Collocation [100] (words in the neighbourhood of the search-word)
Plot [104] (plots where the search-word came in the texts)
Clusters [101] (groups of words in your concordance)
Text segments in Concord [132]
Editing the concordance [117]
Zapping entries [117]
Saving and printing [106]
Window Management [74]

7.18 concordancing on tags

The point of it…

Suppose you're interested in identifying structures of a certain type (as opposed to a given word or phrase), for example sequences of **Noun+Noun+Noun**. You can type in the tags you want to concordance on (with or without any words).

How to do it…

In Concord's search-word box, type in the tags you are interested in. Or define your tags in a tag-file [82].

Examples

<w NN1>table finds *table* as a singular noun (as opposed to as a verb)
<w NN1>* <w NN1>* will find any sequence of two singular common nouns in the BNC Sampler.
Note that **<w NN1>table** finds *table* if your text is tagged with **<** and **>** symbols, or if you have specified **[** and **]** as tag symbols, it will find **[w NN1]table**.
There are some more examples under Search word or phrase [129].
It doesn't matter whether you are using a tag file [82] or not, since WordSmith will identify your tags automatically. (But not by magic: of course you do need to use previously tagged text to use this function.)

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In example 2, the asterisks are because in the BNC, the tags come immediately before the word they refer to: if you forgot the asterisk, Concord would assume you wanted a tag with a separator 269 on either side.

Are you concordancing on tags?

If you are asked this and you are concordancing tags, answer "Yes" to this question. If not, your search word will get " " inserted around each < or > symbol in it, as explained under Search Word Syntax 129.

Case Sensitivity

Tags are only case sensitive if your search-word or phrase is. Search words aren't (by default). So in example 1, you will retrieve *table* and *Table* and *TABLE* if used as nouns (but nothing at all if no tags are in your source texts).

See also: Overview of Tags 76, Handling Tags 76, Showing Nearest Tags in Concord 119, Search word or phrase 129, Types of Tag 85, Viewing the Tags 256, Using Tags as Text Selectors 77

7.19 context word

You may restrict a concordance search by specifying a context word which either must or may not be present within a certain number of words of your search word.
For example, you might have **book** as your search word and **hotel*** as the context word. This will only find **book** if **hotel** or **hotels** is nearby.
Or you might have **book** as your search word and **paper*** as an exclusion criterion. This will only find **book** if **paper** or **papers** is *not* within your Context Search Horizons.

Context Search Horizons

The context horizons determine how far Concord must look to left and right of the search word when checking whether the search criteria have been met. The default 65 is 5,5 (5 to left and 5 to right of the search word) but this can be set to up to 25 on either side. 0,2 would look only to the right within two words of the search word.

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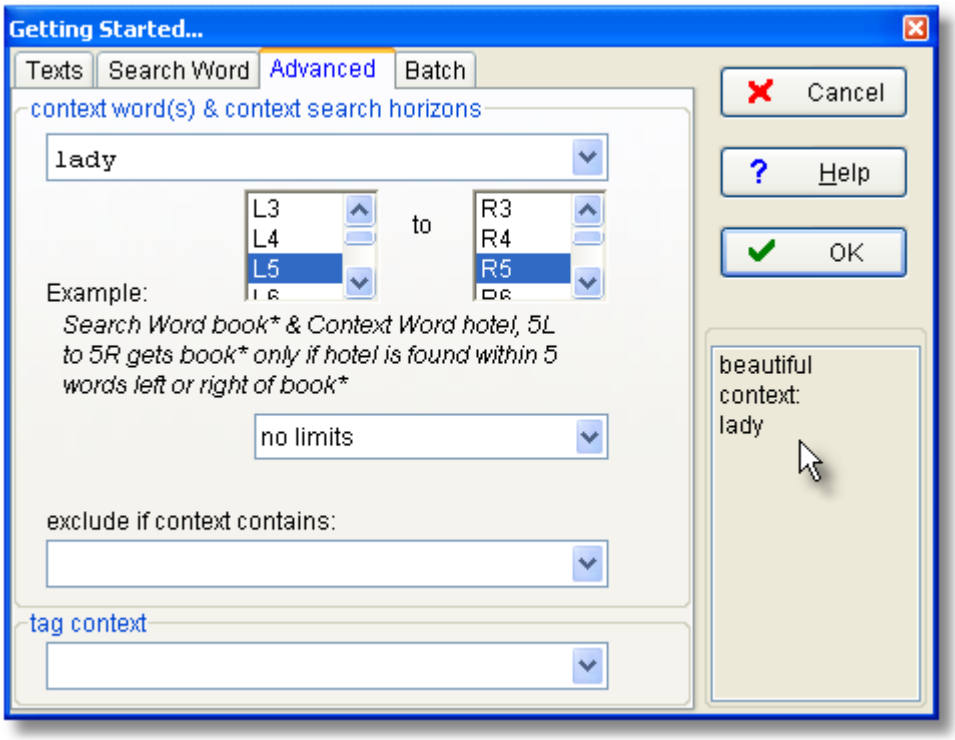

In this example the search-word is **beautiful** and the context word is **lady**, to be sought either left or right of **beautiful**.

Syntax is like that of the search word or phrase 129,
* means disregard the end of the word and can be placed at either end of your context word.
== means case sensitive
/ separates alternatives. You can specify up to 15 alternatives within an 80-character overall limit.
If you want to use *, ? , == , ~ , :\ or / as a character in your search word, put it in double quotes, e.g. "*"

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N	Concordance	Set	T
1	a fortune to make, Dragon, and a beautiful young lady to make it for; and		
2	all who admire you--and all do --as a beautiful and elegant lady, know you to		
3	rude to me, and that there had been a beautiful young lady at Miss Havisham's		
4	of the fireplace, imagination seated a beautiful young lady, with a very little		
5	Polly; 'and see how quiet she is! what a beautiful little lady, ain't she?' This		
6	seen so few that I hardly know. What a beautiful, mild face that lady's is!' 'Ah!'		
7	young lady who is good, accomplished, beautiful. You are good, accomplished,		
8	of. And she says, that lady rich and beautiful that I can never come near,		
9	iron-master. "The lady was wealthy and beautiful, and had a liking for the girl, and		
10	an enclosed letter to a young and beautiful lady, then unmarried, in		
11	If the young lady had appeared beautiful by night, she was perfectly		
12	is the boofer lady?' Now, the boofer, or beautiful, lady was Bella; and whereas		
13	full in Belinda's face, as he responded--'Beautiful, indeed!' The lady cast down		
14	not, my Lady Dedlock reigns supreme. Beautiful, elegant, accomplished, and		
15	off now, however, and I answered, "The beautiful young lady at Miss Havisham's,		
16	down, and looked eagerly inside for the beautiful young lady. Alas! There was		
17	kindly on her. Fresh hope was in it. The beautiful lady who had soothed and		
18	I know. We are here, my love.' The beautiful lady released her hold of		
19	the life and adventures of the beautiful Lady Tollimglower, deceased;		
20	hope of again looking on the face of the beautiful lady. His expectations were		
21	word that had fallen from the lips of the beautiful lady, sounded to Florence like		
22	Begin by thinking well of me,' said the beautiful lady. 'Begin by believing that I		
23	bosom. There was a short silence. The beautiful lady, who at first had seemed to		
24	yet been married twelve months to the beautiful young lady I had seen in the		
25	to the great oath he had sworn to the beautiful young lady, refusing several		
26	a very uncommon sort of person this beautiful young lady must have been, to		
27	his eagerness to hear more. 'A very beautiful young lady,' said Mr Cheeryble,		
28	is living now. She is a lady and very beautiful. And I love her!" With a last faint		

In line 14, the search-word and the context-word are in separate sentences. To avoid this, specify a suitable stop as shown here:

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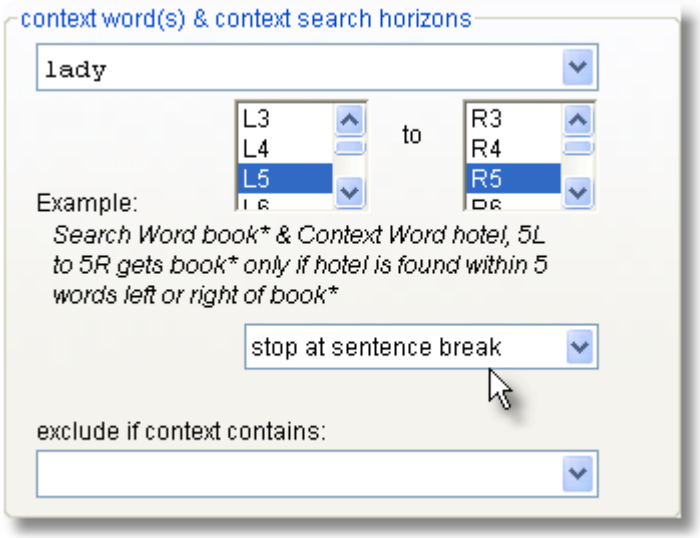

and with the same settings you will get results like these:

N	Concordance	Se
1	a fortune to make, Dragon, and a beautiful young lady to make it for; and	
2	all who admire you--and all do --as a beautiful and elegant lady, know you to	
3	rude to me, and that there had been a beautiful young lady at Miss Havisham's	
4	of the fireplace, imagination seated a beautiful young lady, with a very little	
5	Polly; 'and see how quiet she is! what a beautiful little lady, ain't she?' This	
6	seen so few that I hardly know. What a beautiful, mild face that lady's is!' 'Ah!'	
7	of. And she says, that lady rich and beautiful that I can never come near,	
8	iron-master. "The lady was wealthy and beautiful, and had a liking for the girl, and	
9	an enclosed letter to a young and beautiful lady, then unmarried, in	
10	If the young lady had appeared beautiful by night, she was perfectly	
11	is the boofer lady?' Now, the boofer, or beautiful, lady was Bella; and whereas	
12	off now, however, and I answered, "The beautiful young lady at Miss Havisham's,	
13	down, and looked eagerly inside for the beautiful young lady. Alas! There was	
14	kindly on her. Fresh hope was in it. The beautiful lady who had soothed and	
15	I know. We are here, my love.' The beautiful lady released her hold of	
16	the life and adventures of the beautiful Lady Tollimglower, deceased;	
17	hope of again looking on the face of the beautiful lady. His expectations were	
18	word that had fallen from the lips of the beautiful lady, sounded to Florence like	
19	Begin by thinking well of me,' said the beautiful lady. 'Begin by believing that I	
20	bosom. There was a short silence. The beautiful lady, who at first had seemed to	
21	yet been married twelve months to the beautiful young lady I had seen in the	
22	to the great oath he had sworn to the beautiful young lady, refusing several	
23	a very uncommon sort of person this beautiful young lady must have been, to	
24	his eagerness to hear more. 'A very beautiful young lady,' said Mr Cheeryble,	

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If you have specified a context word, you can re-sort on it. Also, the context words will be in their own special colour 36.

Note: the search only takes place within the current concordance line with the number of characters defined as characters to save 106. That is, if for example you choose search horizons 25L and 25R, but only 100 or 120 characters are saved in each line, it is virtually impossible for there to be 25 words on either side of the search-word to examine when seeking the context word or phrase.

7.20 editing concordances

The point of it…

You may well find you have got some entries which weren't what you expected. Suppose you have done a search for **SHRIMP*/PRAWN*** -- you may find a mention of *Shrimpton* in the listing. It's easy to clean up the listing by simply pressing **Del** on each unwanted line. (Do a sort on the search word first so as to get all the *Shrimptons* next to each other.) The line will turn a light grey colour.
Pressing **Ins** will restore it, if you make a mistake. To delete or restore ALL the lines from the current line to the bottom, press the grey - key or the grey + key by the numeric keypad. When you have finished marking unwanted lines, you can choose (**Alt-Z** or) to zap 74 the deleted lines.
If you're a teacher you may want to blank 94 out the search words: to do so, press the spacebar. Pressing the spacebar again will restore it, so don't worry!
See also: Window Management 74

7.21 follow-up

The point of it...

The idea is to follow up a large concordance by breaking it down into specific sub-sections, so one can see how many of each sub-type are found in the whole list.

Example

The screenshot below came from a concordance of **`beautiful`** in Charles Dickens:

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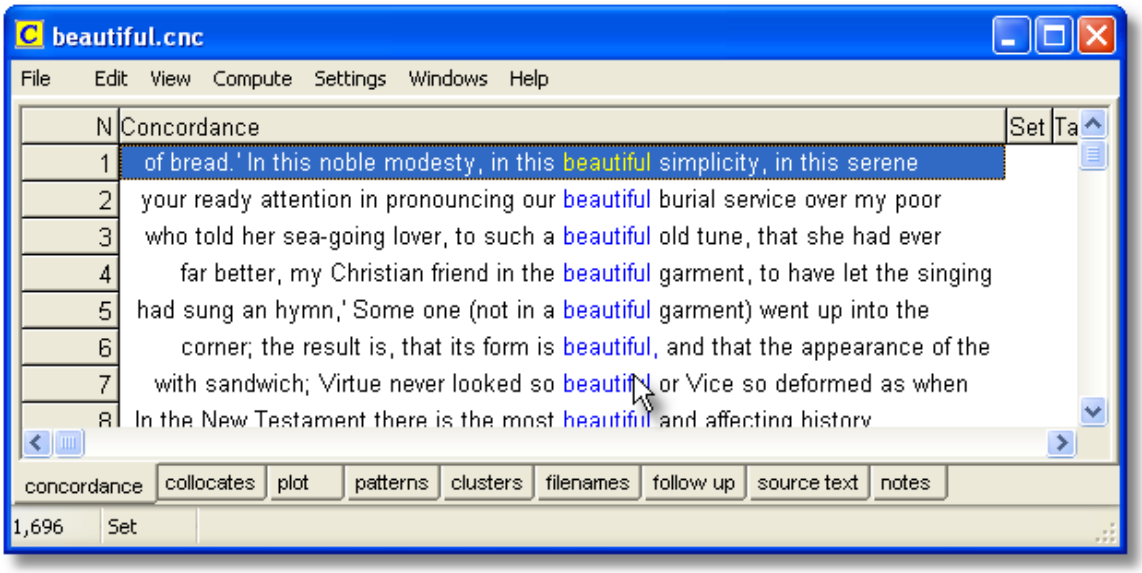
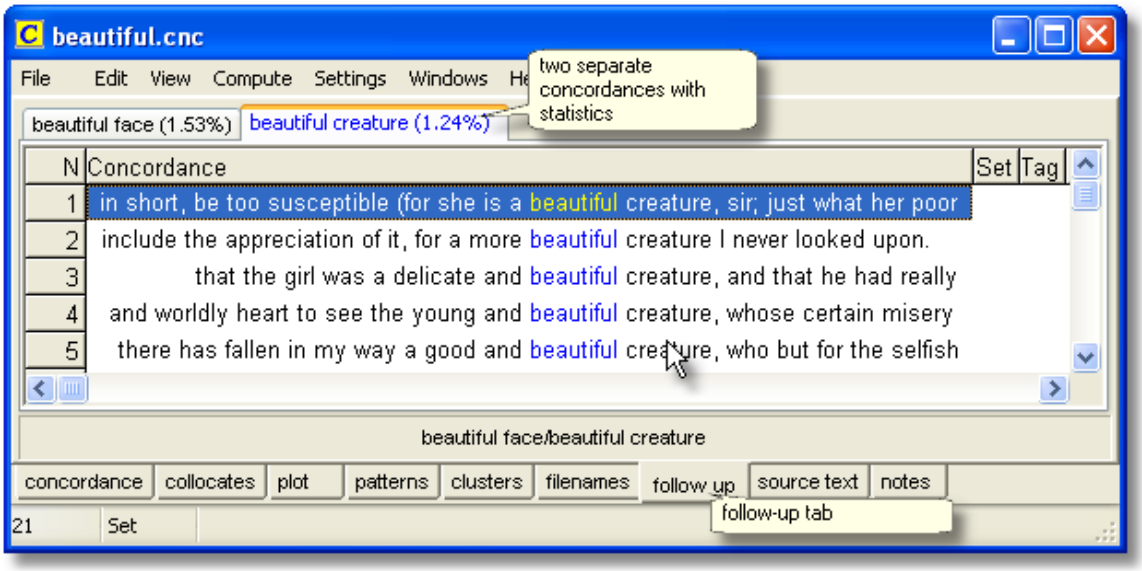


There are 1,696 lines. Looking through them, it became apparent that Dickens was fond of the collocations **beautiful creature** and **beautiful face**, but how many are of **beautiful creature** and what proportion of the 1,696 is that?

"Follow-up" does this. Here, as well as the main follow-up tab below, we see two tabs at the top showing the percentage of the overall 1,696 lines which have **beautiful creature** and **beautiful face**.



Beautiful creature represents 24 lines, which is 1.24% of the whole set. **Beautiful face** takes up 1.53%.

How to do it

In the *Compute* menu, choose *Follow*. In the dialogue

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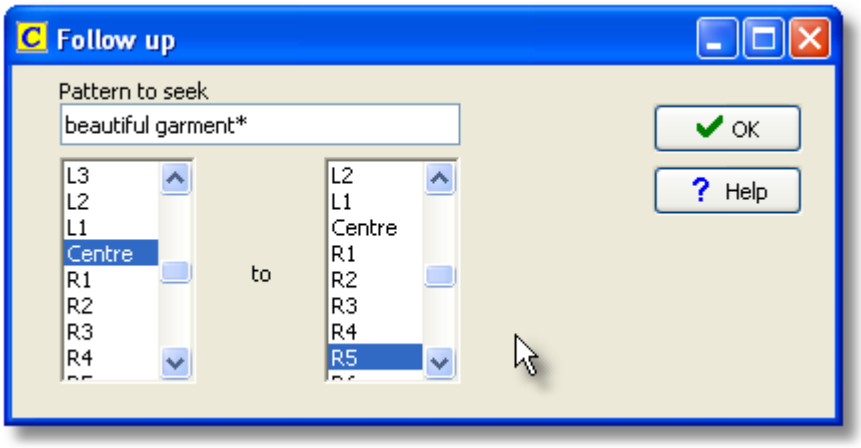

type in your search requirement (for beautiful creature and beautiful face I typed **`beautiful creature/beautiful face`**) and choose the search-horizons.

7.22 nearest tag

Concord allows you to see the nearest tag, if you have specified a tag file 82, which teaches WordSmith Tools what your preferred tags are. Then, with a concordance on screen, you'll see the tag in one of the columns of the concordance window.

The point of it…

The advantage is that you can see how your concordance search-word relates to marked-up text. For example, if you've tagged all the speech by Robert as **`[Rob]`** and Mary as **`[Mary]`**, you can quickly see in any concordance involving conversation between Mary, Robert and others, which ones came from each of them.
Alternatively, you might mark up your text as **`<Introduction>, <Body>`** and **`<Conclusion>`** : Nearest Tag will show each line like this:

```
 1 ... could not give me the time ...   <Introduction>
 2 ... Rosemary, give me another ...           <Body>
 3 ... wanted to give her the help ...         <Body>
 4 ... would not give much for that ...   <Conclusion>
```

To mark up text like this, make up a tag file 82 with your sections and label them as sections, as in these examples:

```
<ABSTRACT> /description "section"
</ABSTRACT>
<INTRODUCTION> /description "section"
</INTRODUCTION>
<SECTION 1> /description "section"
</SECTION 1>
```

or, if you want to identify the speech of all characters in a play, and have a list of the characters, and they are marked up appropriately in the text file, something like this:

```
<Romeo> /description "section"
</Romeo>
<Mercutio> /description "section"
</Mercutio>
<Benvolio> /description "section"
</Benvolio>
```

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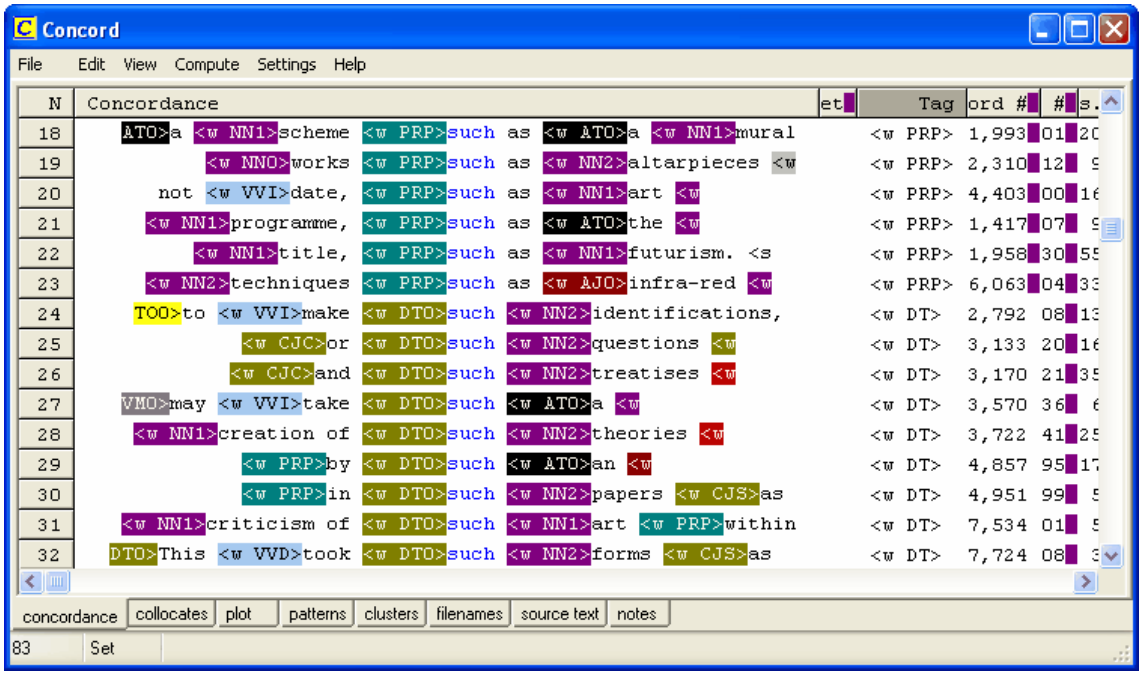
In cases using "section", Nearest Tag will find the section, however remote in the text file it may be. Without the keyword "section", Nearest Tag shows only the current context within the span of text saved 135 with each concordance line.

You can sort 124 on the nearest tags. In the shot below, a concordance of **such** has been computed using BNC World text. Some of the cases of **such** are tagged < PRP> (**such as**) and others are <w DT0>. The Tag column shows the nearest tag, and the whole list has been sorted using that column.



If you can't see any tags using this procedure, it is probably because the Tags to Ignore 76 have the same format. For example, if Tags to Ignore has <*>, any tags such as <title>, <quote>, etc. will be cut out of the concordance unless you specify them in a tag file 82. If so, specify the tag file and run the concordance again.

You can also display tags in colour, or even hide the tags -- yet still colour the tagged word. Here is a concordance of **this** in the BNC World Edition text with the tags in colour:

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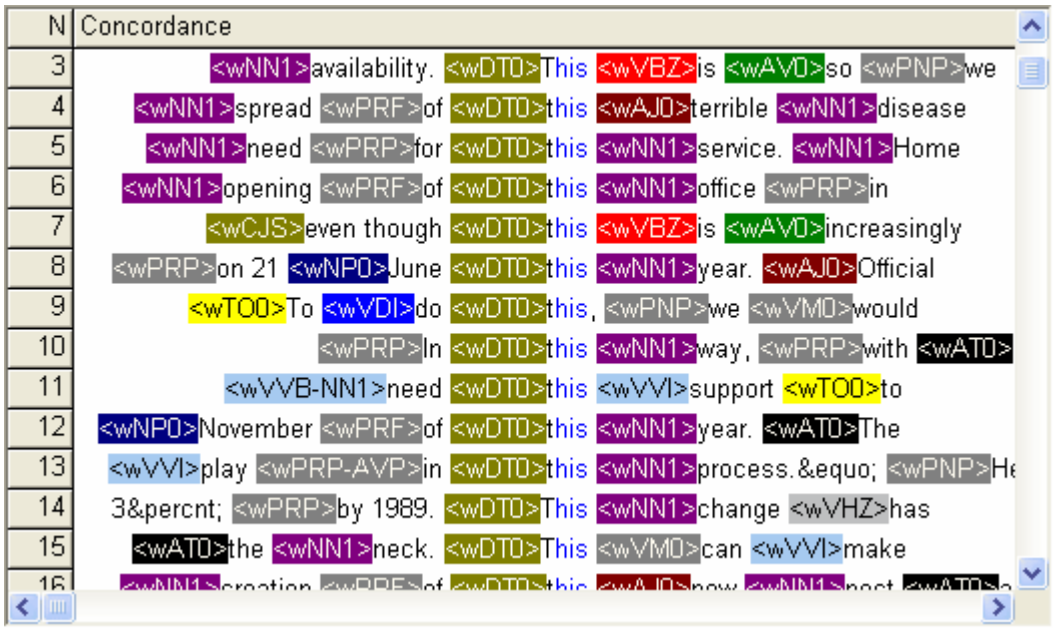

and here is a view showing the same data, with *View* | *Hide Tags* selected.

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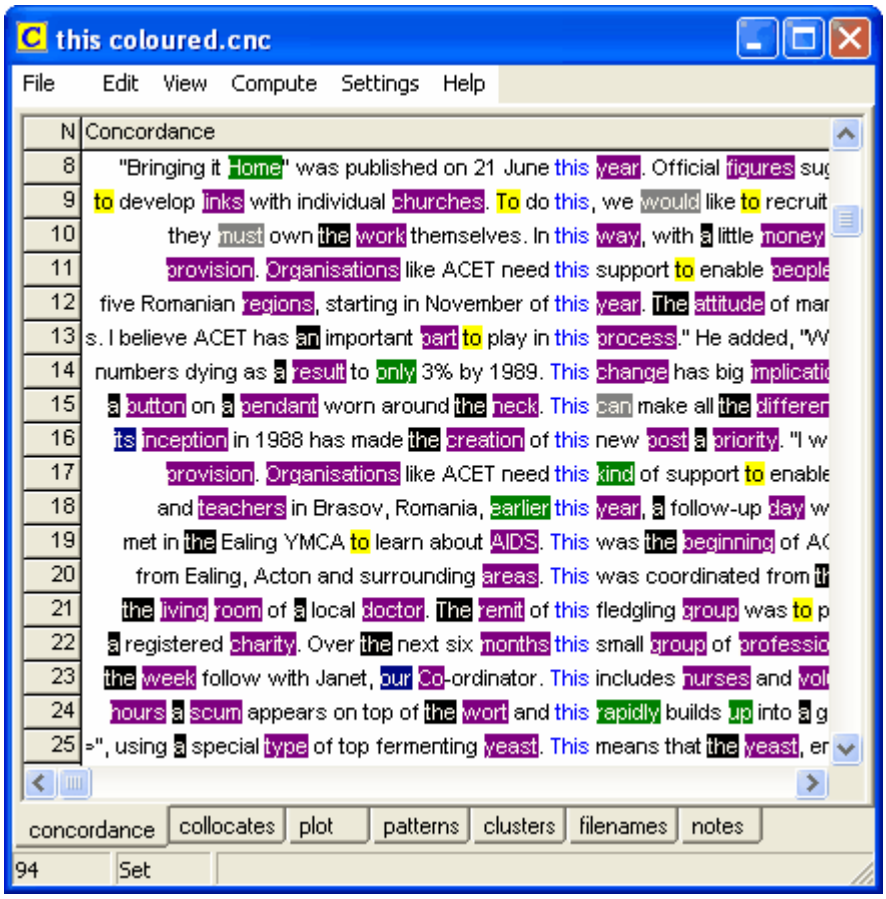

The tags themselves are no longer visible, and only 6 types of tag have been chosen to be viewed in colour.

See also: Guide to handling the BNC, Overview of Tags 76, Handling Tags 76, Making a Tag File 82, Tagged Texts 76, Types of Tag 85, Viewing the Tags 256, Using Tags as Text Selectors 77

7.23 patterns

When you have a collocation window open, one of the tab windows shows "Patterns". This will show the collocates (words adjacent to the search word), organised in terms of frequency within each column. That is, the top word in each column is the word most frequently found in that position. The second word is the second most frequent.

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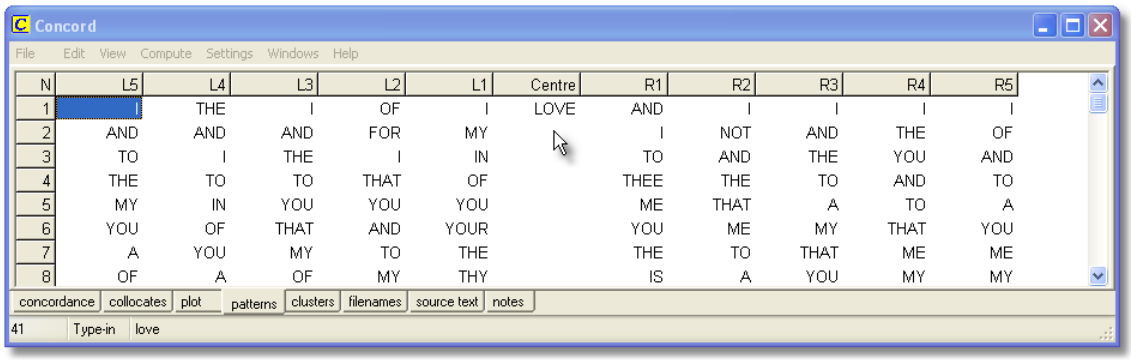

N	L5	L4	L3	L2	L1	Centre	R1	R2	R3	R4	R5
1	I	THE	I	OF	I	LOVE	AND	I	I	I	I
2	AND	AND	AND	FOR	MY		I	NOT	AND	THE	OF
3	TO	I	THE	I	IN		TO	AND	THE	YOU	AND
4	THE	TO	TO	THAT	OF		THEE	THE	TO	AND	TO
5	MY	IN	YOU	YOU	YOU		ME	THAT	A	TO	A
6	YOU	OF	THAT	AND	YOUR		YOU	ME	MY	THAT	YOU
7	A	YOU	MY	TO	THE		THE	TO	THAT	ME	ME
8	OF	A	OF	MY	THY		IS	A	YOU	MY	MY

In R1 position (one word to the right of the search-word **love**) there seem to be both intimate (**thee**) and formal (**you**) pronouns associated with **love** in Shakespeare. And looking at L1 position it seems that speakers talk more of their love for another than of another's love for them.

The minimum frequency for one of the words to be shown at all, is the minimum frequency for collocates 96.

The point of it…

The effect is to make the most frequent items in the neighbourhood of the search word "float up" to the top. Like collocation, this helps you to see lexical patterns in the concordance.

You can also highlight any given pattern collocate 97 in your concordance display.

7.24 remove duplicates

The problem

Sometimes one finds that text files contain duplicate sections, either because the corpus has become corrupted through being copied numerous times onto different file-stores or because they were not edited effectively, e.g. a newspaper has several different editions in the same file. The result can sometimes be that you get a number of repeated concordance lines.

Solution

If you choose *Edit |Remove Duplicates*, **Concord** goes through your concordance lines and if it finds any two where the stored concordance lines 135 are identical, regardless of the filename, date etc. it will mark one of these for deletion. That is, it checks all the "characters to save 135" to see whether the two lines are identical. If you set this to 150 or so it is highly unlikely that false duplicates will be identified, since every single character, comma, space etc. would have to match.

Check before you zap...

At the end it will sort all the lines so you can see which ones match each other before you decide finally to zap 74 the ones you really don't want.

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7.25 re-sorting

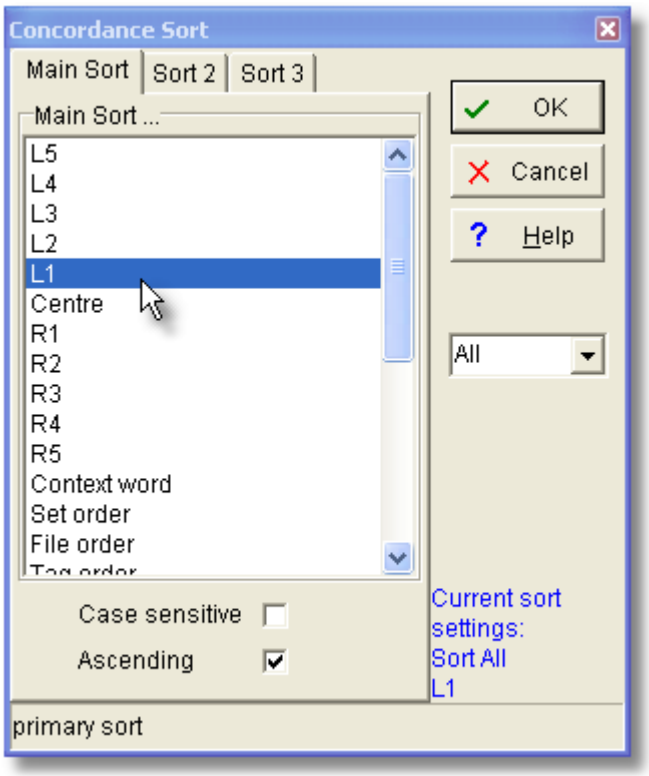
How to do it...

Sorting can be done simply by pressing the top row of any list. Or by pressing F6. Or by choosing the menu option.

The point of it…

The point of re-sorting is to find characteristic lexical patterns. It can be hard to see overall trends in your concordance lines, especially if there are lots of them. By sorting them you can separate out multiple search words and examine the immediate context to left and right. For example you may find that most of the entries have "in the" or "in a" or "in my" just before the search word -- sorting by the second word to the left of the search word will make this much clearer.
Sorting is by a given number of words to the left or right (L1 [=1 word to the left of the search word], L2, L3, L4, L5, R1 [=1 to the right], R2, R3, R4, R5), on the search word itself, the context word (if one was specified), the nearest tag 119, the distance to the nearest tag, a set category 95 of your own choice, or original file order (file).

Main Sort



The listing can be sorted by three criteria at once. A Main Sort on Left 1 (L1) will sort the entries according to the alphabetical order of the word immediately to the left of the search word. A second sort (Sort 2) on R2 would re-order the listing by tie-breaking, that is: only where the L1 words (immediately to the left of the search word) matched exactly, and would place these in alphabetical order of the words 2 to the right of the search word. For very large concordances you may find the third sort (Sort 3) useful: this is an extra tie-breaker in cases where the second sort matches.

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For many purposes tie-breaking is unnecessary, and will be ignored if the "activated" box is not checked.

default sort

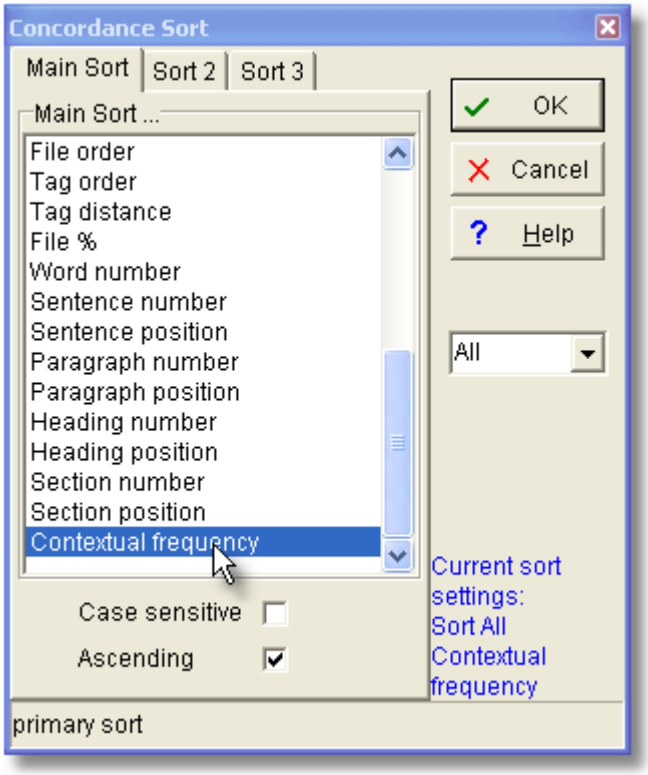
This is set in the main controller settings 108.

sorting by set (user-defined categories 95)

You can also sort by set, if you have chosen to classify the concordance lines according to your own scheme, using letters from **A** to **Z** or **a** to **z** or longer strings. The sort will put the classified lines first, in category order, followed by any unclassified lines (which will appear in a light grey colour). See Nearest Tag 119 for details of sorting by tags.
The colour of the search word will change according to the sort system used.

other sorts

As the screenshot below shows, you can also sort by a number of other criteria, most of these accessible simply by clicking on their column header.



The "contextual frequency" sort means sorting on the average ranking frequency of all the words in each concordance line which don't begin with a capital letter. For this you will be asked to specify your reference corpus wordlist. The result will be to sort those lines which contain "easy" (highly frequent) words at the top of the list.

All

By default you sort all the lines; you may however type in for example 5-49 to sort those lines only.

Ascending

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If this box is checked, sort order is from **A** to **Z**, otherwise it's from **Z** to **A**.

See also: WordList sort 186, KeyWords sort 151, Choosing Language 30

7.26 re-sorting: collocates

The frequency-ordered collocation display can be re-sorted to reveal the frequencies sorted by their *total* frequencies overall (the default), by the left or right frequency total, or by any individual frequency position, from 25 words to the left of the search word to 25 words to the right. Just press the header of a column to sort it. Press again to toggle the sort between ascending to descending.

The point of it…

is to find patterns of collocation, so as to more fully understand the company your search-word keeps.

The choices depend on the collocation horizons 96.

See also: Collocation 100, Collocation Display 98

7.27 re-sorting: dispersion plot

This automatically re-sorts the dispersion plot, rotating through these options:

alphabetically (by file-name)
in *frequency* order (in terms of hits per 1,000 words of running text)
by first occurrence in the source text(s): *text order*
by *range*: the gap between first and last occurrence in the source text.

see also: Dispersion Plot 104

7.28 search-word and other settings

Search Word or Phrase and/or Tag

Type the word or phrase 129 Concord will search for when making the concordance, or (below) the name of a file of search words 131. You may also choose from a history list 274 of your previous search words. For details of syntax, see Search Word Syntax 129 or the set of examples shown in this screenshot:

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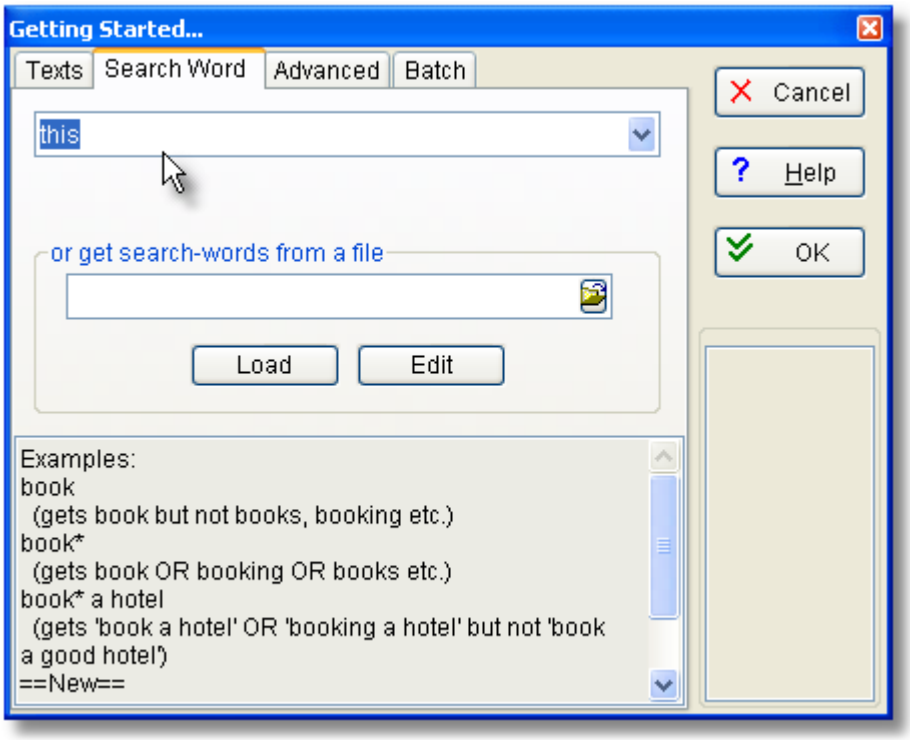

If you want to do many concordances in a file-based search 131, first prepare a small text file containing the search words, e.g. containing

```
this
that
the other
==Major*==
```

Press the file button to locate your text file, the press the *Load* button. This will then change its name to something like *Clear 4*, where 4 means as in the example above that there are 4 different search-words to be concordanced. See "Batch" below for details on saving each one under a separate filename, otherwise all the searches will be combined into the same concordance.

Advanced

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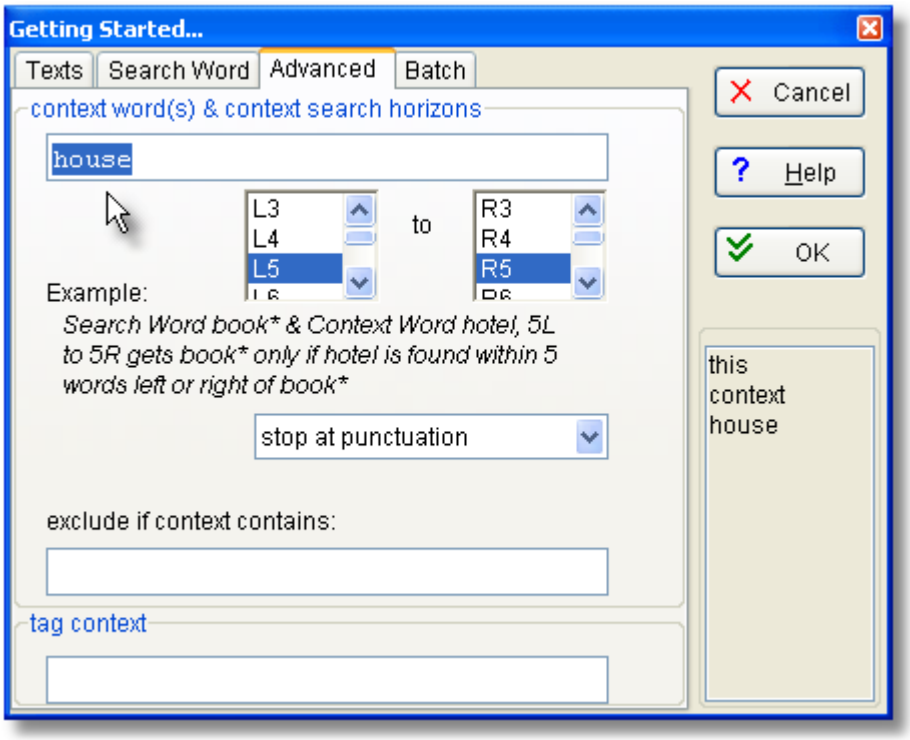

Context Word(s) and Context Search Horizons

You may wish to find a word or phrase depending on the context. In that case you can specify context word(s) which you want, or which you do not want (and if found will mean that entry is not used).
For example, if the search word is **book*** and the *context* word is **hotel**, you'll get **book, books, booked, booking, bookable**, but only if **hotel** is found within your Context Search Horizons 113. Or if the search word is **book*** and the *exclusion* word is **hotel**, you'll get **book, books, booked, booking, bookable**, as long as **hotel** is *not* found within your context search horizons. Or if the search word is **book*** and the exclusion word is **booked**, you'll get **book, books, booking, bookable**, but not **booked**.

Tag Context

The tag context is the context of tags as defined in your tag-file 82, to the left of the search-word. In this example, the tag context is **<u speaker=Simon>**:

```
.......<u speaker=Simon> Between you and me, I wish I hadn't booked
that hotel ....
```

The tag context actually can include a bit more than that -- if this chunk is in **<section 1>**, and there is a tag showing the end of section 1 (probably **</section>**) which occurs anywhere to the right of the search-word, then the full tag context might be **<section 1><u speaker=Simon>** or even more. So a tag context is actually the whole set of tags which are still in operation at the point where your search-word was found.

You may wish to find a word or phrase depending on the tag context. In that case you specify tag attributes which you require.
For example, if the search word is **book*** and the tag context is **Simon**, you'll get **book, books, booking, bookable, booked** only if **Simon** is found in the tag context.

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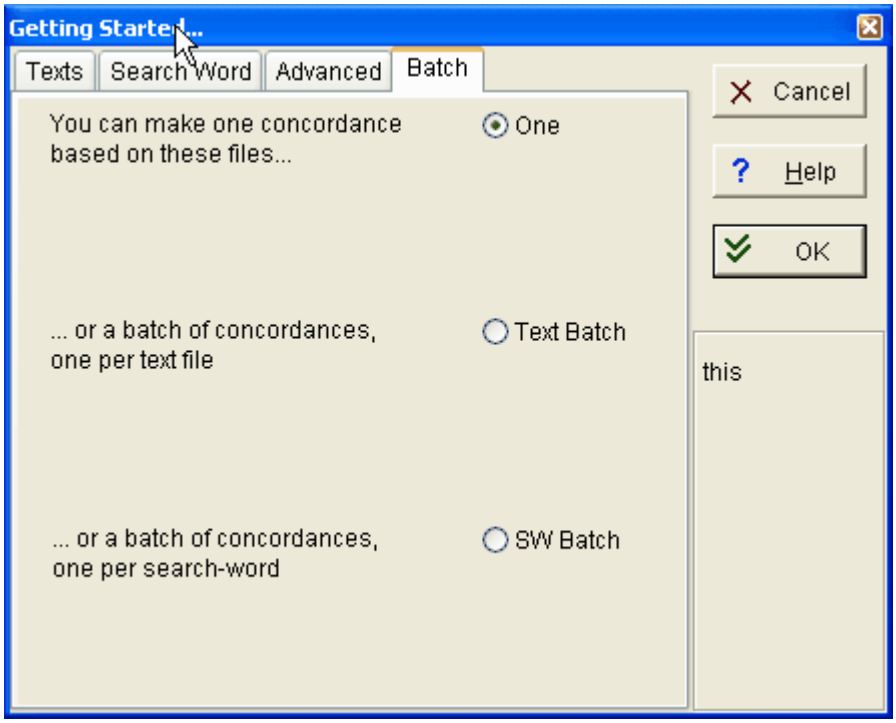
Batch

Suppose you're concordancing **book*** in 20 text files: you might want *One* concordance based on all 20 files (the default), or instead 20 separate concordances in a zipped batch 26 which can be viewed separately (*Text Batch*). If you have multiple search-words in a file-based search 131 as explained above, you may want each result saved separately (*SW Batch*).



Other settings affecting a concordance are available too:
see WordSmith Controller Concordance Settings 133; Accented characters 264; Choosing Language 30, Context Word(s) & Context Search Horizons 113

7.29 search word syntax

By default, Concord does a whole-word non-case-sensitive search.

Examples

search word	finds
book	*Book* or *book* or *BoOk*
book*	*book, books, booking, booked*
***book**	*textbook* (but not *textbooks*)
b*	*banana, baby, brown etc.*
***ed**	*walked, wanted, picked etc.*
bo* in	*book in, books in, booking in* (but not *book into*)

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book * hotel	*book a hotel, book the hotel, book my hotel*
bo* in*	*book in, books in, booking in, book into*
book?	*book, books, book; book.*
book^	*book, books*
b^^k	*book, back, bank,* etc.
==book==	*book* (but not *BOOK* or *Book*)
book/paperback	*book* or *paperback*

symbol	meaning	examples
*	disregard the end of the word, disregard a whole word	**tele*** ***ness** ***happi*** **book * hotel**
?	any single character (including punctuation) will match here	**Engl???** **?50.00**
#	any sequence of numbers, 0 to 9	**$#** **£#.00**
^	any single letter of the alphabet will match here	**Fr^nc^**
==	case sensitive	**==French==** **==Fr*==**
:\	means use a file for lots of search-words (see file-based search_words 131)	**c:\text\frd.txt**
/	separates alternative search-words. You can specify alternatives within an 80-character overall limit	**may/can/will**
<>	beginning & end of tags	**<w NN1>**

If you want to use ***, ? , == , #, ^ , :\, >, <** or **/** as a character in your search word, put it in double quotes. Examples:

```
"*"
Why"?"
and"/"or
":\"
"<"
```

Don't forget that question-marks come at the end of words (in English anyway) so you might need ***"?"**

Tags

You can also specify tags in your search-word if your text is tagged.
Examples:

symbol	meaning	examples
<w NN1>*	single common noun (BNC)	***book, chair, elephant***
<w NN?>*	singular or plural common noun	***book, chairs***
<w NN1>t*	any single noun beginning	***table, teacher***

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	with **T** or **t**	
<w NN1>* <w NN1>*	two single common nouns in sequence	***campaign manager***

See also: Tag Concordancing 112, Context Word 113, Modify source texts 88

7.30 file-based search-words

The point of it…

To save time typing in complex searches.
You may want to do a standard search repeatedly on different sub-corpora.
Or as Concord allows an almost unlimited number of entries, you may wish to do a concordance involving many search-words or phrases 129.

The space for typing in multiple search-words is limited to 80 characters (including **/** etc.). If your preferred search-words will exceed this limit or you wish to use a standardised search, you can prepare a file containing all the search-words.

How to do it…

A sample (**Program Files\wsmith5\concordance_search_words.txt**) is included with the distribution files.
Use a Windows editor (e.g. Notepad) to prepare your own. Each one must be on a separate line of your file. No comment lines can be included, though blank lines may be inserted for readability.
If you want to require a context for a given word, put **context:=** as in this example:
book context:=hotel
(which seeks **book** and only shows results if **hotel** comes in the context horizons).
Then, instead of typing in each word or phrase in the Search Word dialogue box, just browse for the file.
Then press *Load* to read the entries (or *Clear* if you change your mind).

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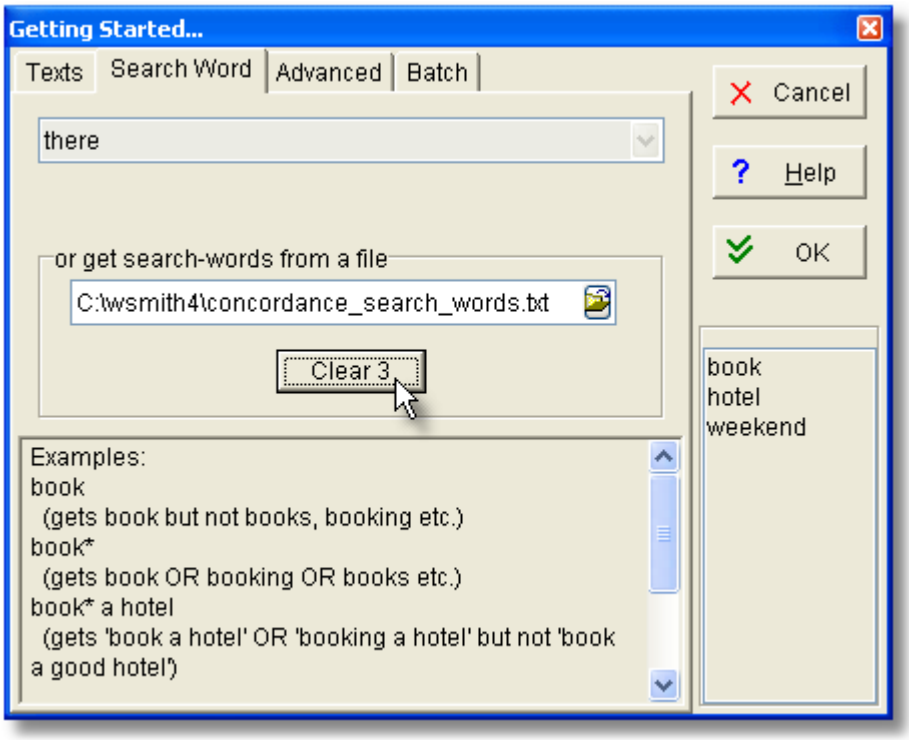

Lemmas and file-based concordancing

Note that where Concord has been called up 277 from WordList, and the highlighted word in the word list is the head entry with lemmas 165, a temporary file will be created, listing the whole set of lemmas, and Concord will use this file-based search-word procedure to compute the concordance. The temporary file will be stored in your **`Program Files\wsmith5`** folder unless you're running on a network in which case it'll be in Windows' temporary folder, e.g. **`\windows\temp`**. It's up to you to delete the temporary file.

Automated file-based concordances

If you want Concord to process a whole lot of different searchwords, saving each result as it goes along so you can get a lot of work done with WordSmith unattended, choose *SW Batch* under Concordance Settings 126.

7.31 text segments in Concord

A concordance line brings with it information about which segment of the text it was found in.

In the screenshot below, a concordance on **`year`** was carried out; the listing has been sorted by Heading Position -- in the top 2 lines, **`year`** is found as the 3rd word of a heading. The advantage of this is that it is possible to identify search-words occurring near sentence starts, near the beginning of sections, of headings, of paragraphs.

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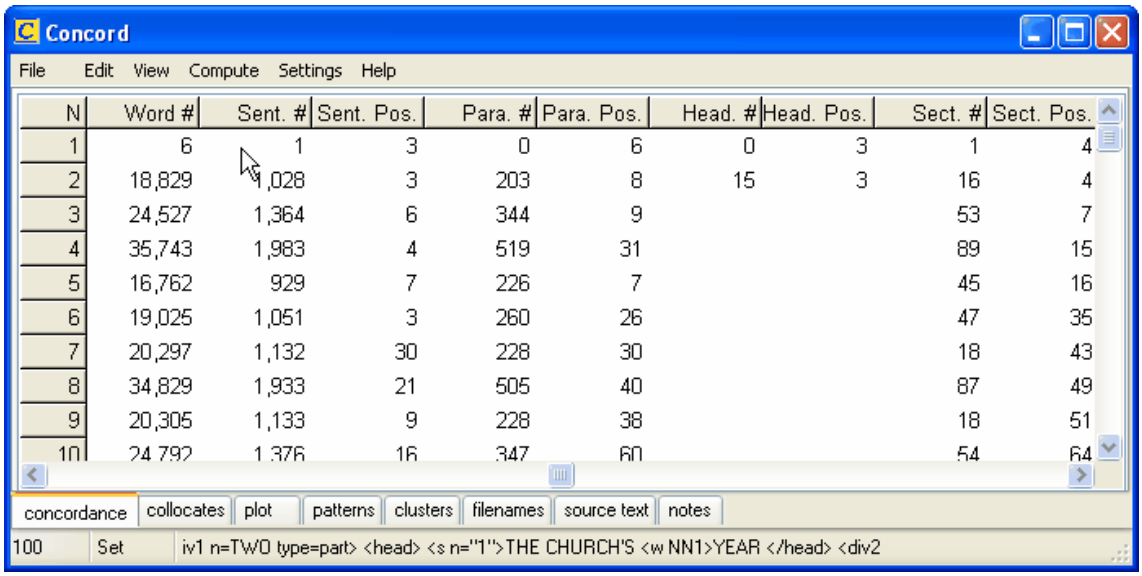

You can toggle the numbers between raw numbers and percentages 108.

See also: Start and end of text segments 86.

7.32 WordSmith controller: Concord: settings

These are found in the main Controller 4 under *Adjust Settings | Concord.*
This is because some of the choices -- e.g. collocation horizons 96 -- may affect other Tools.

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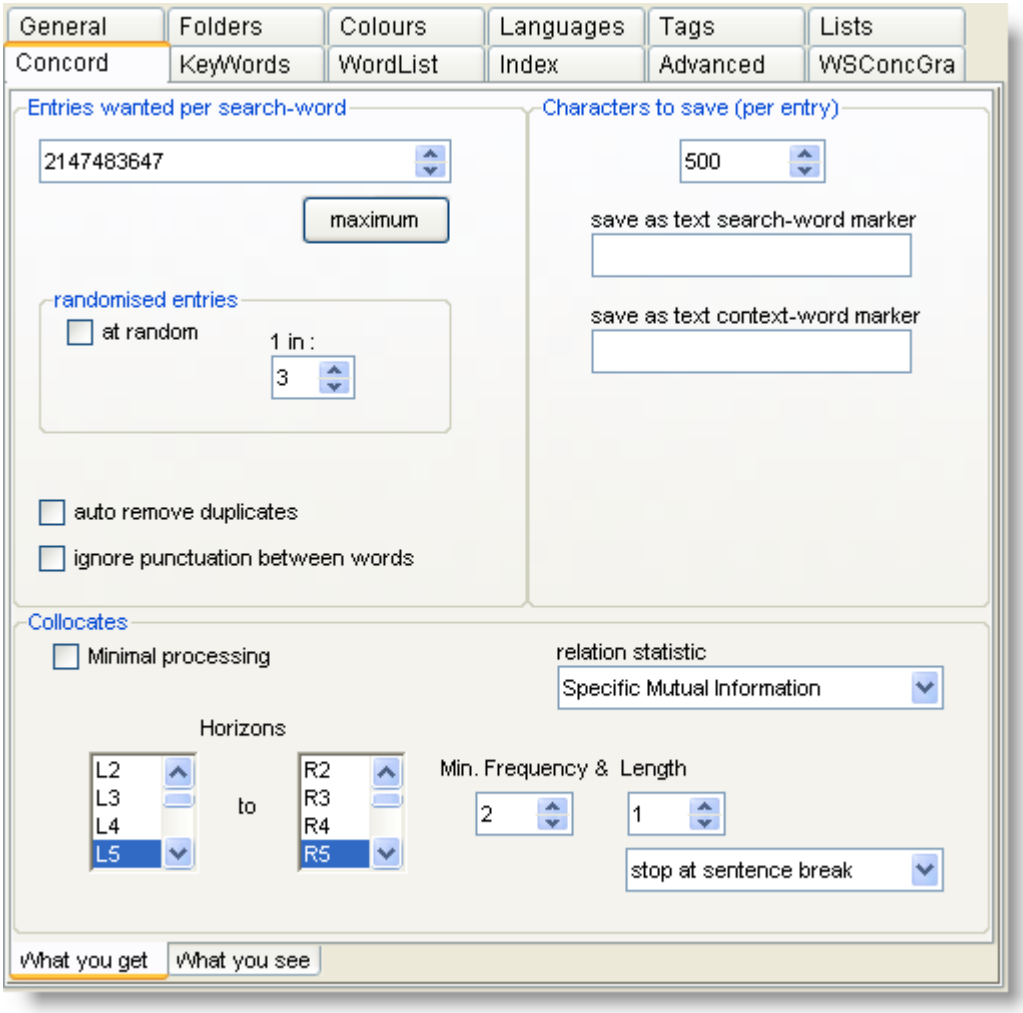

WHAT YOU GET and WHAT YOU SEE

There are 2 tabs for settings affecting *What you get* in the concordance and *What you see* in the display. There is a screenshot at Concord: viewing options 108 showing the options under *What you see*.

WHAT YOU GET

Entries Wanted

The maximum is more than 2 billion lines. This feature is useful if you're doing a number of searches and want, say, 100 examples of each. The 100 entries will be the *first 100* found in the texts you have selected. If you search for more than 1 search-word (eg. **book/paperback**), you will get 100 of **book** and 100 of **paperback**.

"*at random*" is a feature which allows you to randomise the search. Here **Concord** goes through the text files and gets the 100 entries by giving each hit a random chance of being selected. To get 100 entries **Concord** will have to have found around 450-550 hits with the settings shown below. You can set the randomiser anywhere from 1 in 2 to 1 in 1,000.

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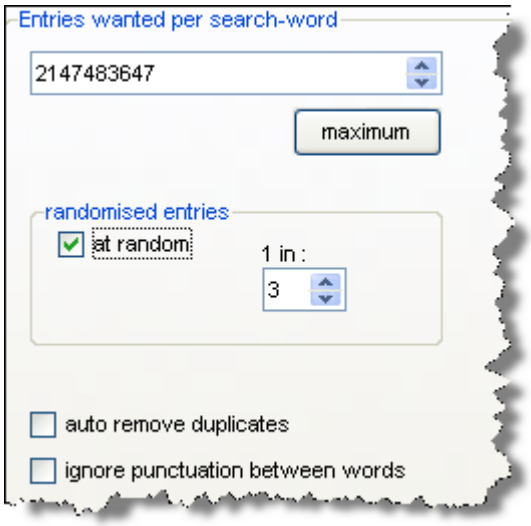
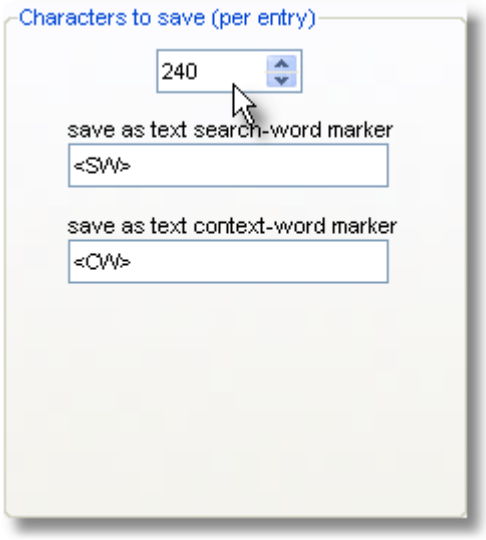


Characters to save

Here is where you set how many characters in a concordance line will be stored as text as the concordance is generated. The default is 160 (minimum 10 and maximum 8,000). The reason for this is that you will probably want a fixed number of characters so that when using a non proportional font, such as Courier or Lucinda Console, the search-words line up nicely. This number of characters will be saved when you save your results, so even if you subsequently delete the source text file you can still see some context. If you grow the lines more text will be read in (and stored) as needed. There are examples here 265.



Save as text search-word or context-word marker: here you can also specify markers for your search-word and context-word 106.

Collocates

By default, **Concord** will compute collocates as well as the concordance, but you can set it not to if you like (*Minimal processing*). For further details, see Collocate Horizons 96 or Collocation 100

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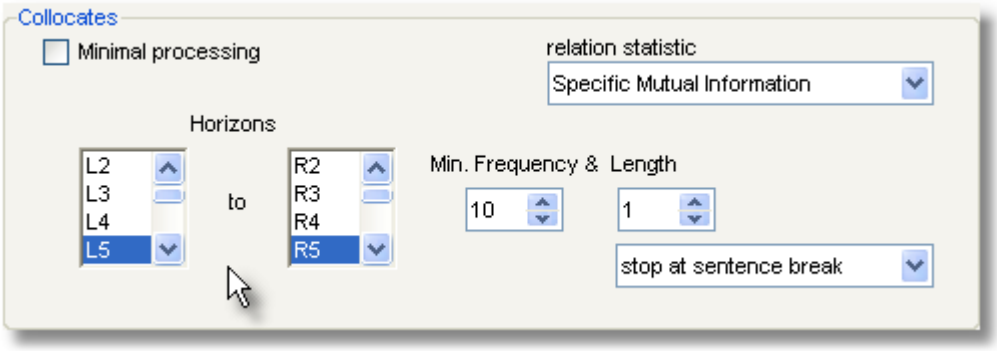

Collocates relation statistic

Choose between Specific Mutual Information, MI3, Z Score, Log Likelihood. See Mutual Information Display 178 for examples of how these can differ.

WHAT YOU SEE

The options are explained at Concord: viewing options 108.

See also: Concord Saving and Printing 106, Concord Help Contents 93, Collocation Settings 96.

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KeyWords

8 KeyWords

8.1 purpose

This is a program for identifying the "key" words in one or more texts. Key words are those whose frequency is unusually high in comparison with some norm. Click here for an example 144 .

The point of it…

Key-words provide a useful way to characterise a text or a genre. Potential applications include: language teaching, forensic linguistics, stylistics, content analysis, text retrieval.
The program compares two pre-existing word-lists, which must have been created using the WordList tool. One of these is assumed to be a large word-list which will act as a reference file. The other is the word-list based on one text which you want to study.
The aim is to find out which words characterise the text you're most interested in, which is automatically assumed to be the smaller of the two texts chosen. The larger will provide background data for reference comparison.
Key-words and links 147 between them can be plotted 148, made into a database 146, and grouped according to their associates 139.

8.2 index

Explanations

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Associate 139

See also : WordSmith Main Index 2

8.3 Two word-list analysis

The usual kind of **KeyWords** analysis. It compares the one text file (or corpus) you're chiefly interested in, with a reference corpus based on a lot of text.

Choose Word Lists

In the dialogue box you will choose 2 files. The text file in the box above and the reference corpus file in the box below.

See also How Key Words are Calculated 147, KeyWords Settings 153

8.4 associate definition

An "associate" of key-word X is another key-word (Y) which co-occurs with X in a number of texts. It may or may not co-occur in proximity to key-word X. (A *collocate* would have to occur within a given distance of it, whereas an associate is "associated" by being key in the same text.)
For example, in a key-word database of *Guardian* newspaper text, *wine* was found to be a key word in 25 out of 299 stories from the Saturday "tabloid" page, thus a key key word 145 in this section. The top associates of *wine* were: *wines, Tim, Atkin, dry, le, bottle, de, fruit, region, chardonnay, red, producers, beaujolais*.
It is strikingly close to the early notion of "collocate".
Association operates in various ways. It can be strong or weak, and it can be one-way or two-way. For example, the association between *to* and *fro* is one-way (*to* is nearly always found near *fro* but it is rare to find *fro* near *to*).
See also: Definition of Key Word 145, Associates 139, Definitions 269, Mutual Information 175

8.5 associates

"Associates" is the name given to key-words associated with a key key-word 146.

The point of it…

The idea is to identify words which are commonly associated with a key key-word, because they are key words in the same texts as the key key-word is. An example will help.
Suppose the word *wine* is a key key-word in a set of texts, such as the weekend sections of newspaper articles. Some of these articles discuss different wines and their flavours, others concern cooking and refer to using wine in stews or sauces, others discuss the prices of wine in a context of agriculture and diseases affecting vineyards. In this case, the associates of *wine* would be items like *Chardonnay, Chile, sauce, fruit, infected, soil*, etc.
The listing shows associates in order of frequency. A menu option allows you to re-sort them.

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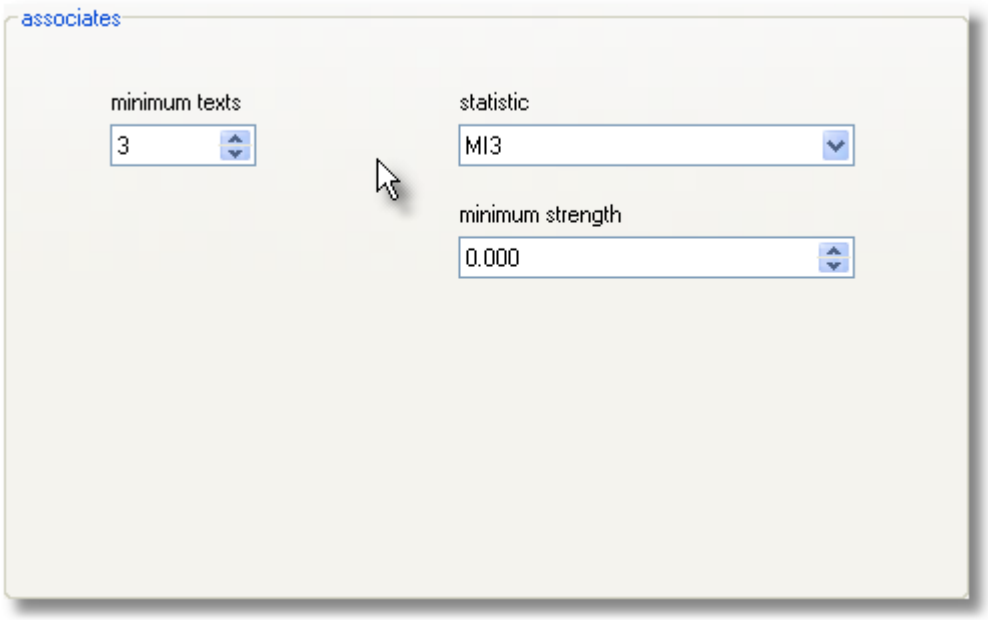
Settings

You can set a minimum number of text files for the association procedure, in the database settings 153:



Minimum texts

The screenshot settings will only process those key-key-words which appear in at least 3 text files.

Statistic

Choose the mutual information statistic 178 you prefer, apart from Z score which uses a span (here we're using the whole text).

Minimum strength

This will only show associates which reach at least the strength set here, eg. 3.000.

See also: definition of associate 139.

8.6 choosing files

Current Text Wordlist

In the upper box, choose a word list file.
To choose more than 1 word list file, press Control as you click to select non-adjacent lists, or Shift to select a range.
This box determines which wordlist(s) you're going to find the key words of.

Reference Corpus Wordlist

The the box below, you choose your Reference Corpus 284 List. (This can be set permanently in the main Controller Settings).

No word-lists visible

If you can't see any word lists in the displays, either change folders until you can, or go back to the WordList tool and make up at least 2 word lists: this procedure requires at least two before it can make a comparison.

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8.7 clumps

"Clumps" is the name given to groups of key-words associated 139 with a key key-word 146.

The point of it (1)…

The idea here is to refine associates by grouping together words which are found as key in the same sub-sets of text files. The example used to explain associates will help.
Suppose the word *wine* is a key key-word in a set of texts, such as the weekend sections of newspaper articles. Some of these articles discuss different wines and their flavours, others concern cooking and refer to using wine in stews or sauces, others discuss the prices of wine in a context of agriculture and diseases affecting vineyards. In this case, the associates of *wine* would be items like *Chardonnay, Chile, sauce, fruit, infected, soil*, etc. The associates procedure shows all such items unsorted.
The clumping procedure, on the other hand, attempts to sort them out according to these different uses. The reasoning is that the key words of each text file give a condensed picture of its "aboutness", and that "aboutnesses" of different texts can be grouped by matching the key word lists. Thus sets of key words can be clumped together according to the degree of overlap in the key word lexis of each text file.

Two stages

The **initial clumping process does no grouping**: you will simply see each set of key-words for each text file separately. To group clumps 150, you may simply join those you think belong together (by dragging), or regroup with help by pressing .
The listing shows clumps sorted in alphabetical order. You can re-sort by frequency (the number of times each key word in the clump appeared in all the files which comprise the clump).
See also: definition of associate 139, regrouping clumps 150

8.8 KeyWords clusters

A KeyWords cluster, like a WordList cluster, represents two or more words which are found repeatedly near each other. However, a KeyWords cluster only uses key words.

A screenshot will help make things clearer.

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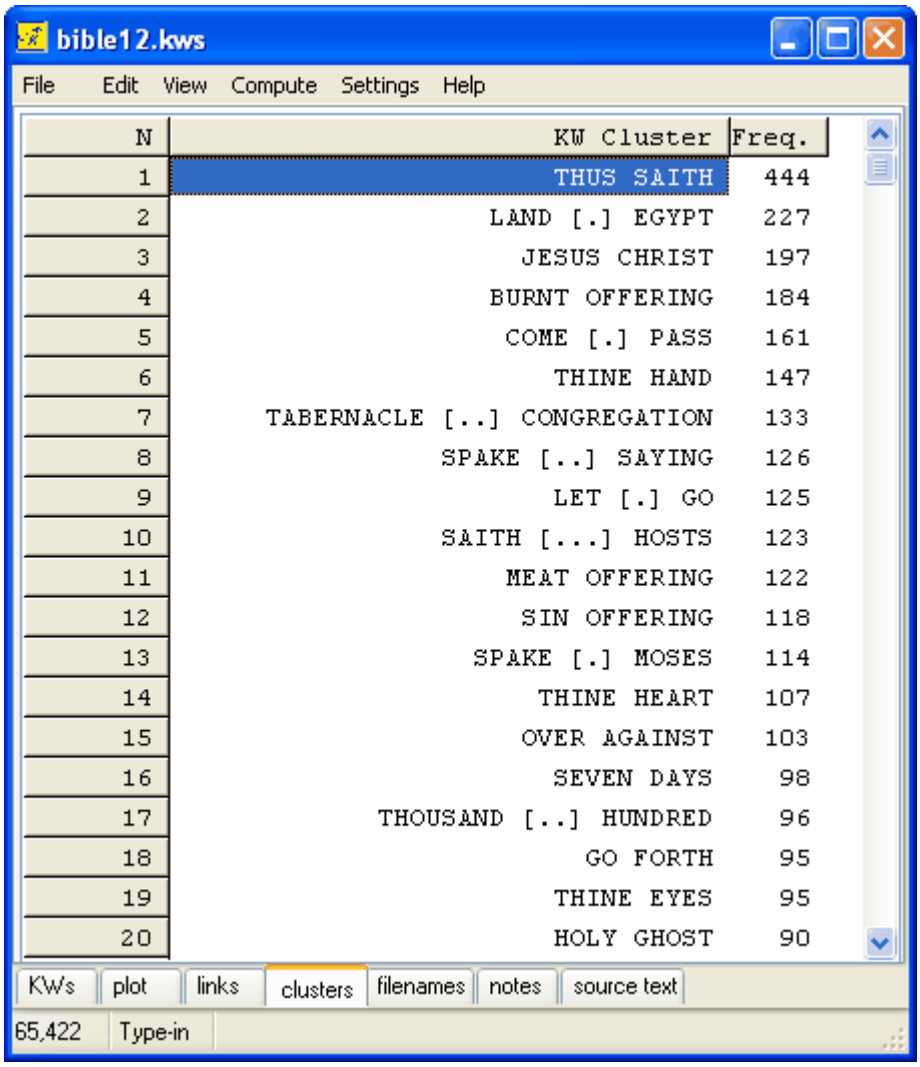

These are clusters computed using the Bible as source text. Each of the words here is "key" by comparison to a reference corpus; the clusters show cases where these KWs occur within the current collocation horizons. The **[...]** brackets represent cases where the KWs are not found together, e.g in **come [.] pass** there is one dot because the repeated occurrences are **come to pass**.

See also: Plot calculation 148.

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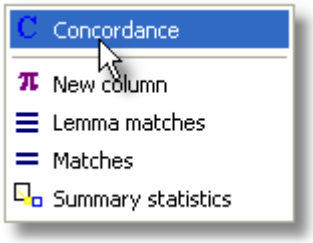
8.9 concordance

With a key word or a word list list on your screen, you can choose *Compute* and



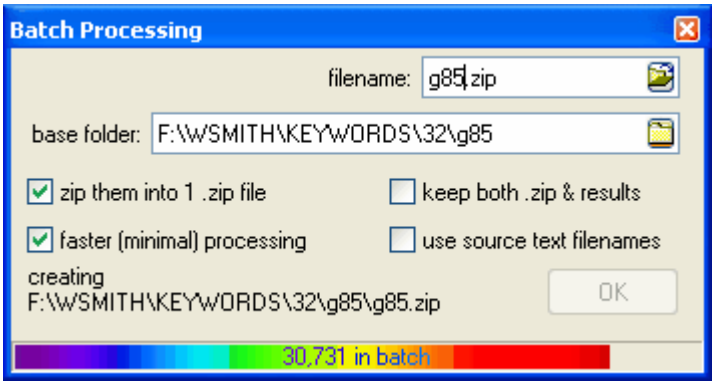
to call up a concordance of the currently selected word(s). The concordance will search for the same word in the original text file that your key word list came from.

The point of it…

is to see these same words in their original contexts.

8.10 creating a database

To build a key words database, you will need a set of key word lists. For a decent sized database, it is preferable to build it like this:
1. Make a batch 26 of word lists.
2. Use this to make a batch 26 of keyword lists. Set "faster minimal processing" on as in this shot, so as to not waste time computing plots etc.



3. Now, in **KeyWords**, choose *New* | *Database*.

This enables you to choose the whole set of key word files.
Note that making a database means that only positive 147 key words will be retained.

In the Controller KeyWords settings 153 you can make other choices:

minimum frequency for database

If you set this to 2 you will only use for the database any KWs which appear in 2 or more texts

min. KWs per text

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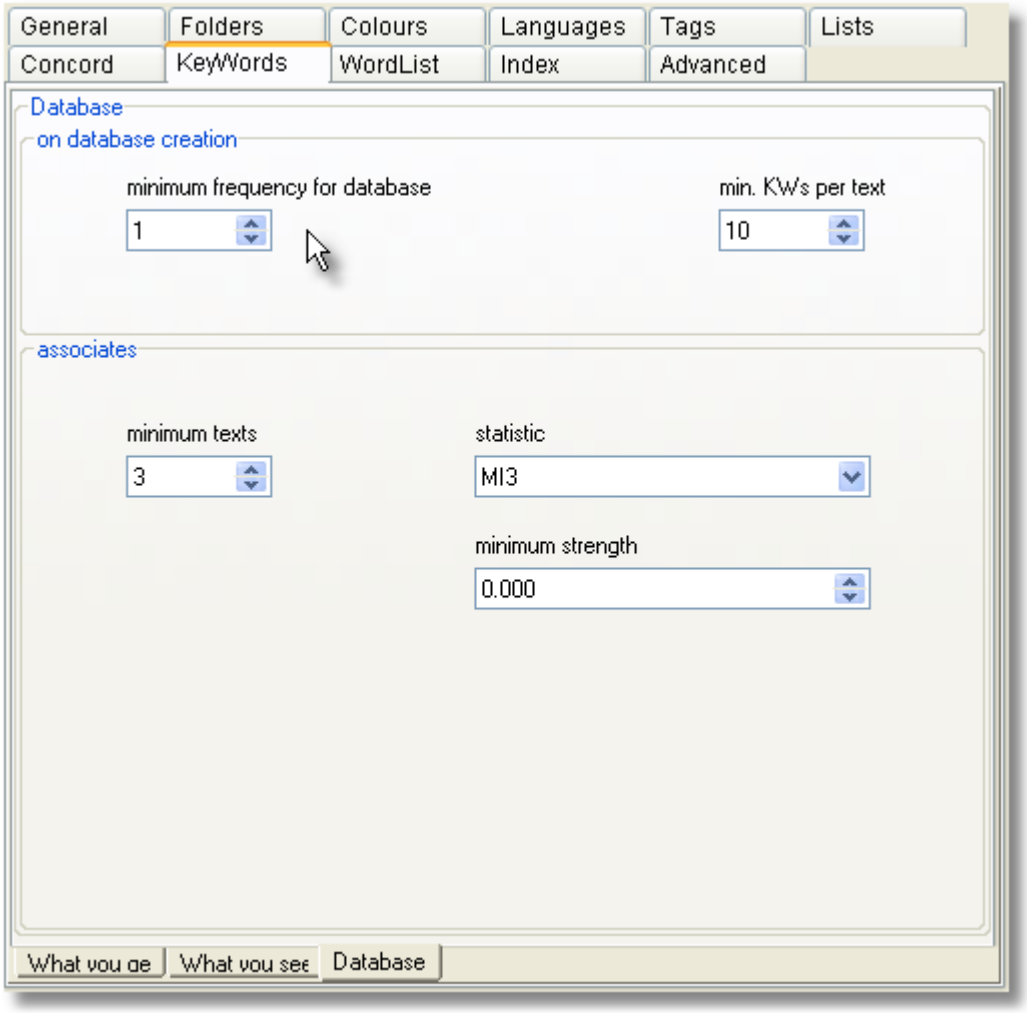
If this is set to 10, any KW results files which ended up with very few KWs will be ignored.



See also: associates 139.

8.11 example of key words

You have a collection of assorted newspaper articles. You make a word list based on these articles, and see that the most frequent word is *the.* Among the rather infrequent words in the list come examples like *hopping*, *modem, squatter, grateful*, etc.

You then take from it a 1,000 word article and make a word list of that. Again, you notice that the most frequent word is *the*. So far, not much difference.

You then get **KeyWords** to analyse the two word lists. **KeyWords** reports that the most "key" words are: *squatter, police, breakage, council, sued, Timson, resisted, community*.

These "key" words are not the most frequent words (which are those like *the*) but the words which are most unusually frequent in the 1,000 word article. Key words usually give a reasonably good clue to what the text is about.

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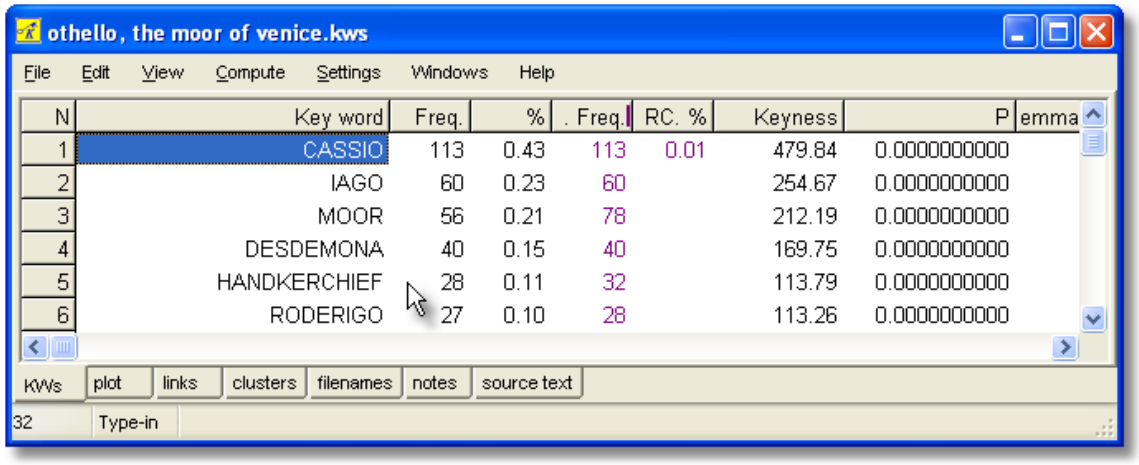
Here is an example from the play Othello.



8.12 key key-word definition

A "key key-word" is one which is "key" in more than one of a number of related texts. The more texts it is "key" in, the more "key key" it is. This will depend a lot on the topic homogeneity of the corpus being investigated. In a corpus of City news texts, items like *bank*, *profit*, *companies* are key key-words, while *computer* will not be, though *computer* might be a key word in a few City news stories about IBM or Microsoft share dealings.

See also: How Key Words are Calculated 147, Definition of Key Word 145, Creating a Database 143, Definitions 269

8.13 key-ness definition

The term "key word", though it is in common use, is not defined in Linguistics. This program identifies key words on a mechanical basis by comparing patterns of frequency. (A human being, on the other hand, may choose a phrase or a superordinate as a key word.)
A word is said to be "key" if
a) it occurs in the text at least as many times as the user has specified as a Minimum Frequency
b) its frequency in the text when compared with its frequency in a reference corpus is such that the statistical probability as computed by an appropriate procedure 147 is smaller than or equal to a p value 148 specified by the user.

positive and negative keyness

A word which is *positively* key occurs *more* often than would be expected by chance in comparison with the reference corpus.
A word which is *negatively* key occurs *less* often than would be expected by chance in comparison with the reference corpus.

typical key words

KeyWords will usually throw up 3 kinds of words as "key".
First, there will be proper nouns. Proper nouns are often key in texts, though a text about racing could wrongly identify as key, names of horses which are quite incidental to the story. This can

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be avoided by specifying a higher Minimum Frequency.

Second, there are key words that human beings would recognise. The program is quite good at finding these, and they give a good indication of the text's "aboutness". (All the same, the program does not group synonyms, and a word which only occurs once in a text may sometimes be "key" for a human being. And **KeyWords** will not identify key phrases unless you are comparing wordlists based on word clusters 285.)

Third, there are high-frequency words like **because** or **shall** or **already**. These would not usually be identified by the reader as key. They may be key indicators more of style than of "aboutness". But the fact that KeyWords identifies such words should prompt you to go back to the text, perhaps with Concord (just choose *Compute* | *Concordance* C), to investigate why such words have cropped up with unusual frequencies.

See also: How Key Words are Calculated 147, Definition of Key Key-Word 145, Definitions 269, KeyWords Settings 153

8.14 KeyWords database

(default file extension .KDB)

The point of it…

The point of this database is that it will allow you to see the "key-key-words" in your set of files. That is, the key-words which are most frequent over a number of files.
For example, if you have 500 business reports, each one will have its own key words. These will probably be of two main kinds. There will be key-words which are key in one text but are not generally key (names of the firms and words relating to what they individually produce); and other, more general words (like **consultant, profit, employee**) which are typical of business documentation generally.
By making up a database, you can sort these out. The ones at the top of the list, when you view them, will be those which are most typical of the genre. The list is ordered in terms of "key key-ness" but can be toggled into alphabetical order and back again.

You can set a minimum number of files that each word must have been found to be key in, using *Settings* | *KeyWords* | *Database*.

When viewing a database you will be able to investigate the associates 139 of the key key-words.
Under Statistics, you will also be able to see details of the key words files which comprise the database (file name and number of key words per file), together with overall statistics on the number of different types and the tokens (the total of all the key-words in the whole database including repeats).

See also : Creating a database 143, Definition of key key-word 145

8.15 KeyWords: advice

1. Don't call up a plot of the key words based on more than one text file. It doesn't make sense! Anyway the plot will only show the words in the first text file. If you want to see a plot of a certain word or phrase in various different files, use Concord dispersion 104.

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2. There can be no guarantee that the "key" words are "key" in the sense which you may attach to "key". An "important" word might occur once only in a text. They are merely the words which are outstandingly frequent or infrequent in comparison with the reference corpus.

3. Compare apples with pears, or, better still, Coxes with Granny Smiths. So choose your reference corpus in some principled way. The computer is not intelligent and will try to do whatever comparisons you ask it to, so it's up to you to use human intelligence and avoid comparing apples with phone boxes!

8.16 KeyWords: calculation

The "key words" are calculated by comparing the frequency of each word in the wordlist of the text you're interested in with the frequency of the same word in the reference wordlist. All words which appear in the smaller list are considered, unless they are in a stop list 70.

If **the** occurs say, 5% of the time in the small wordlist and 6% of the time in the reference corpus, it will not turn out to be "key", though it may well be the most frequent word. If the text concerns the anatomy of spiders, it may well turn out that the names of the researchers, and the items **spider, leg, eight**, etc. may be more frequent than they would otherwise be in your reference corpus (unless your reference corpus only concerns spiders!)

To compute the "key-ness" of an item, the program therefore computes
its frequency in the small wordlist
the number of running words 175 in the small wordlist
its frequency in the reference corpus
the number of running words 175 in the reference corpus
and cross-tabulates these.

Statistical tests include:
the classic chi-square test of significance with Yates correction for a 2 X 2 table
Ted Dunning's 262 Log Likelihood test, which gives a better estimate of keyness, especially when contrasting long texts or a whole genre against your reference corpus.

See UCREL's log likelihood site for more on these.

A word will get into the listing here if it is unusually frequent (or unusually infrequent) in comparison with what one would expect on the basis of the larger wordlist.

Unusually *in*frequent key-words are called "negative key-words" and appear at the very end of your listing, in a different colour. Note that negative key-words will be omitted automatically from a keywords database 146 and a plot.

Words which do not occur at all in the reference corpus are treated as if they occurred 5.0e-324 times (0.0000000 and loads more zeroes before a 5) in such a case. This number is so small as not to affect the calculation materially while not crashing the computer's processor.

8.17 KeyWords: links

The point of it…

is to find out which key-words are most closely related to a given key-word.
A plot 148 will show where each key word occurs in the original file. It also shows how many links

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there are between key-words.

What are links?

Links are "co-occurrences of key-words within a collocational span". An example is much easier to understand, though:
Suppose the word *elephant* is key in a text about Africa, and that *water* is also a key word in the same text. If *elephant* and *water* occur within a span of 5 words of each other, they are said to be "linked". The number of times they are linked like this in the text will be shown in the Links window.

What you see

This Links window shows the number of links followed by a column headed "in" and a percentage. This percentage represents the number of links divided by the total number of occurrences of the word in question (the "in" column number). Thus if you choose to see the links of *elephant,* and *elephant* crops up 10 times in your original text, and all 10 of those times it's found near the word *water*, (even though *water* occurs 40 times altogether), you'll see 100%. If you choose to see the links of *water*, the percentage next to *elephant* will be 25%.

The collocation horizons 96 are those set in **Concord**, and go up to 25 words to left and right. The default 65 is 5,5.

Double-click on any word in the plot listing 148 to call up a window (up to maximum of 20 windows) which show the linked key-words.

See also: Plot calculation 148, KeyWords clusters 141

8.18 make a word list from keywords data

With a key word list on your screen, you can press W to save your data as a word list (for later comparison, etc. using **WordList** functions).

8.19 p value

(Default=0.000001)

The ***p*** value is that used in standard chi-square and other statistical tests. This value ranges from 0 to 1. A value of .01 suggests a 1% danger of being wrong in claiming a relationship, .05 would give a 5% danger of error. In the social sciences a 5% risk is usually considered acceptable.
In the case of key word analyses, where the notion of risk is less important than that of selectivity, you may often wish to set a comparatively low ***p*** value threshold such as 0.000001 (one in 1 million) (1E-6 in scientific notation) so as to obtain fewer key words. Or you can set a low "maximum wanted" number in the main Controller 4, under *Adjust Settings* | *KeyWords*.
If the chi-square procedure 147 is used, the computed p value will only be shown if all appropriate statistical requirements are met (all expected values >= 5).

See also: Definitions 269

8.20 plot calculation

The point of it…

is to see where the key words are distributed within the text. Do they cluster around the middle or near the beginning of the text?

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How it's done

This will calculate the inter-relationships between all the key words identified so far, excluding any which you have deleted or zapped 74.

1. it does a concordance on the text finding all occurrences of each key word;
2. it then works out which of each of the other key words appear within the collocation horizons (set in *Settings*). It uses the larger of the two horizons.
3. it then plots all the words showing where each occurrence comes in the original file (with a "ruler" showing how many words there are in each part of the file).
4. it computes how many other key-words co-occurred with it, within the current collocational span.
5. it computes a plot dispersion value 283.

Note: this process depends on KeyWords being able to find the source texts 271 which your original wordlist was based on.

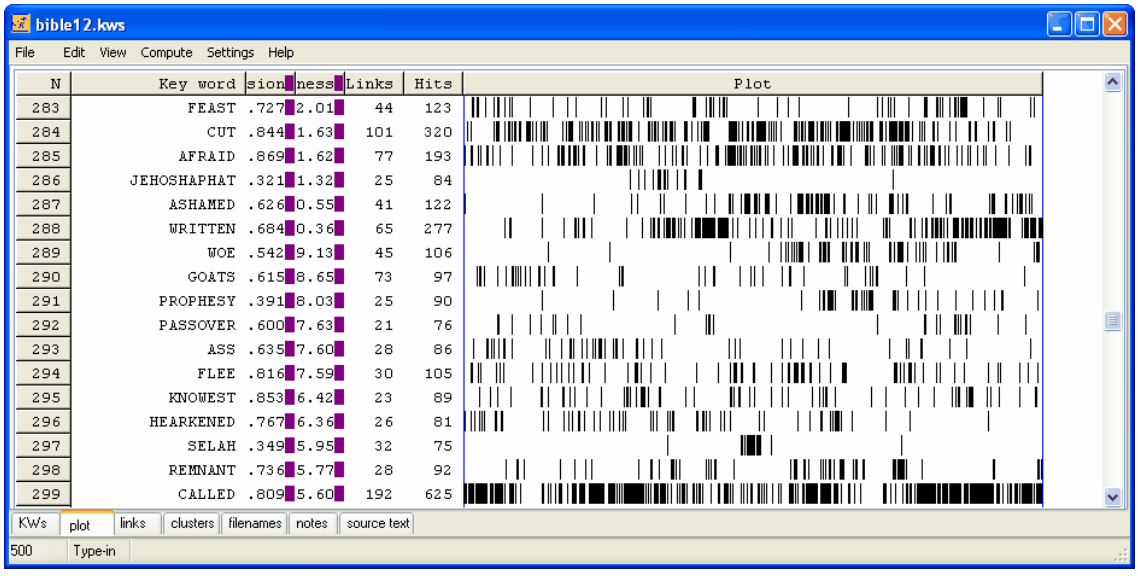
You may find it useful to export your plot 61 and make other graphs, as explained under Save As 61.

See also: Plot Links 147, Key words plot display 149

8.21 plot display

The plot will give you useful visual insights into how often and where the different key words crop up in the text. The plot is initially sorted 151 to show which crop up more at the beginning (e.g. in the introduction) and then those from further in the text.

The following screenshot shows KWs of the Bible, revealing where each term occurs. The name **Jehoshaphat**, for example, occurs mainly about one third of the way through the text.



re-sorting

You can re-sort 151 the listing using . Re-sorting rotates through the following types:
first mention of each key word in the text

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dispersion within the text
the original plot order (which is based on key-ness)
alphabetical order
total number of links with other key-words

links

This shows the total number of links 147 between the key-word and other key-words in the same text, within the current collocation span (default 65 = 5,5). That is, how many times was each key-word found within 5 words of left or right of any of the other key-words in your plot.

hits

This column is here to remind you of how many occurrences there were of each key-word. When you have obtained a plot, you can then see the way certain words relate to others. To do this, look at the Links window in the tabs at the bottom, showing which other key words are most linked 147 to the word you clicked on. That is, which other words occur most often within the collocation horizons you've set. The Links window should help you gain insights into the lexical relations here.

Each plot window is dependent on the key words listing from which it was derived. If you close that down, it will disappear. You can *Print* it. There's no *Save* option because the plot comes from a key words listing which you should *Save*, or *Save As*. There's no save as text 61 option because the plot has graphics, which cannot adequately be represented as text symbols, but you can *Copy* to the clipboard 265 (Ctrl-Ins) and then paste it into a word processor as a graphic. Alternatively, use the *Output* | *Data as Text File* option, which saves your plot data (each word is followed by the total number of words in the file, then the word number position of each occurrence).

The ruler 279 in the menu (**)** allows you to see the plot divided into 8 equal segments if based on one text, or the text-file divisions if there is more than one.

See also: Key words plot 148, plot dispersion value 283

8.22 regrouping clumps

How to do it

You can simply join by dragging, where you think any two clumps belong together because of semantic similarity between their key-words.

Or if you press , **KeyWords** will inform you which two clumps match best. You'll see a list of the words found only in one, a list of the words found only in the other, and (in the middle) a list of the words which match. It's up to you to judge whether the match is good enough to form a merged clump.

If you aren't sure, press **Cancel**.

If you do want to join them, press **Join**.

If you're sure you **don't** want to join them and don't want **KeyWords** to suggest this pair again, press **Skip**. You can tell **KeyWords** to skip up to 50 pairs. To clear the memory of the items to be skipped, press **Clear Skip**.

The point of it (2)…

Scott 262 (1997) shows how clumping reveals the different perceived roles of women in a set of *Guardian* features articles.

See also: clumps 141

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8.23 re-sorting: KeyWords

How to do it...

Sorting can be done simply by pressing the top row of any list. Or by pressing F6 / Ctrl/F6. Or by choosing the menu option. Press again to toggle between ascending & descending sorts.

A **key words list** offers a choice between sorting by
key-ness (the *key*est words appear at the top)
alphabetical order (from A to Z)
frequency in the smaller list (the most frequent words come first)
frequency in the reference list (the most frequent words come first)

A **key words plot** rotates between sorting by
key-ness (the *key*est words appear at the top)
alphabetical order (from A to Z)
frequency (words which appear oftenest come first)
number of links (the most linked words come first)
first mention of each key word in the text
range (words used in smallest sections of text come first)

A **key key words database** toggles between sorting by
frequency (the most *key key* words appear at the top)
alphabetical order (from A to Z)

An Associates 139 list toggles between sorting by
frequency (association between title-word and item)
alphabetical order (from A to Z)
frequency (association between item and title-word)

8.24 the key words screen

The display shows

1. each key word
2. its frequency in the source text(s) which these key words are key in. (Freq. column below)
3. the % that frequency represents.
4. its frequency in the reference corpus (RC. Freq. column)
5. the reference corpus frequency as a %
6. keyness (chi-square or log likelihood statistic 147) (Keyness column)
7. p value 148.

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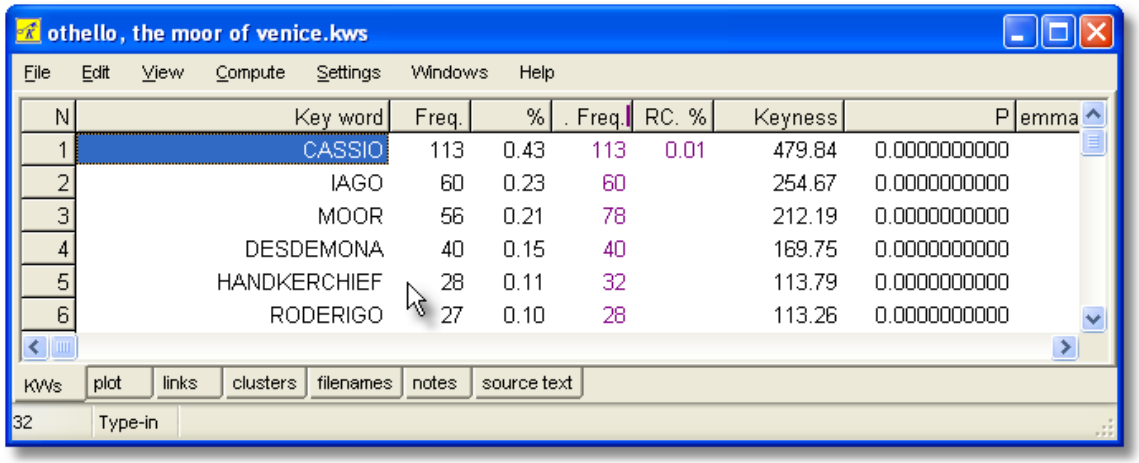

The calculation of how unusual the frequency is, is based on the statistical procedure 147 used. The statistic appears to the right of the display. If the procedure is log likelihood, or if chi-square is used and the usual conditions for chi-square obtain (expected value >= 5 in all four cells) the probability (p) will be displayed to the right of the chi-square value.

The criterion for what counts as "outstanding" is based on the minimum probability value selected before the key words were calculated. The smaller the number, the fewer key words in the display. Usually you'll not want more than about 40 key words to handle.
The words appear sorted 151 according to how outstanding their frequencies of occurrence are. Those near the top are outstandingly frequent. At the end of the listing you'll find any which are outstandingly infrequent 145 (negative keywords), in a different colour.

There is no upper limit to the keyness column of a set of key words. It is not necessarily sensible to assume that the word with the highest keyness value must be the most outstanding, since keyness is computed merely statistically; there will be cases where several items are obviously equally key (to the human reader) but the one which is found least often in the reference corpus and most often in the text itself will be at the top of the list.

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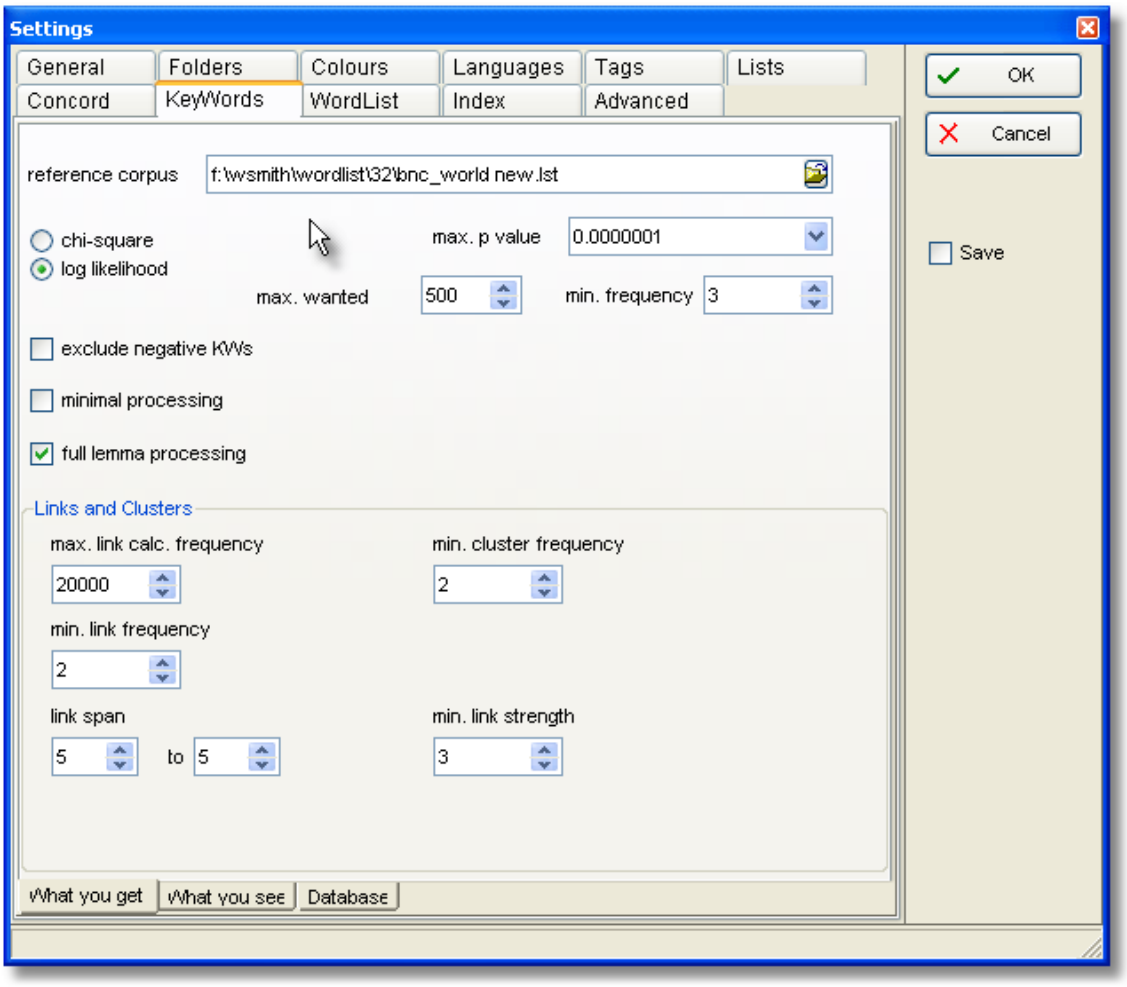
8.25 WordSmith controller: KeyWords settings

These are found in the main Controller 4 under *Adjust Settings* | *KeyWords*.



This is because some of the choices may affect other Tools. KeyWords and WordList both use similar routines: KeyWords to calculate the key words of a text file, and WordList when comparing comparing word-lists 159.

Procedure

Chi-square or Log Likelihood. The default is Log Likelihood. See procedure 147 for further details.

Max. p value

The default level of significance. See p value 148 for more details.

Max. wanted (500) and Min. frequency (3)

You may want to restrict the number of key words (KWs) identified so as to find for example the ten most "key" for each text. The program will identify all the key words, sort them by key-ness, and then throw away any excess. It will thus favour positive key words 145 over negative ones. The minimum frequency is a setting which will help to eliminate any words or clusters which are unusual but infrequent. For example, a proper noun such as the name of a village will usually be

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extremely infrequent in your reference corpus, and if mentioned only once in the text you're analysing, it is likely not to be "key". The default setting of 3 mentions as a minimum helps reduce spurious hits here. In the case of short texts, less than 600 words long, a minimum of 2 will automatically be used.

Exclude negative KWs

If this is checked, KeyWords will not compute negative key words (ones which occur significantly *in*frequently).

Minimal processing

If this is checked, KeyWords will not compute plots 148, links 147 or KW clusters 141 as it computes the key words (they can always be computed later assuming you do not move or delete the original text files). This is useful if computing a lot of KW files in a batch, eg. to make a database.

Full lemma processing

If this is checked (the default), KeyWords will compute the full frequency in the case of lemmatised 165 items. For example if **GO** represents **WENT, GOES** etc. and **GO** alone had a frequency of 10 but the whole set **GO, WENT, GONE** etc. totalled 100, then its frequency will be counted as 100. If unchecked **GO** would count only 10.

Max. link frequency

To compute a plot is hard work as all the KWs have to be concordanced so as to work out where they crop up. To compute links between each KW is much harder work again and can take time especially if your KWs include some which occur thousands or hundreds of times in the text. To keep this process more manageable, you can set a default. Here 2000 means that any KW which occurs more than 2000 times in the text will not be used for computing links 147. (It will still appear in the plots and list of KWs, of course.)

Database: minimum frequency

The default is 1. See database 146.

Database: associate minimum texts

The default is 5. See associates 139.

See also: KeyWords Help Contents 138, KeyWords calculation 147.

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WordSmith Tools

WordList

9 WordList

9.1 purpose

This program generates word lists based on one or more ASCII or ANSI text files. The word lists are automatically generated in both alphabetical and frequency order, and optionally you can generate a word index 166 list too.

The point of it…

These can be used

1. simply in order to study the type of vocabulary used;
2. to identify common word clusters 285;
3. to compare the frequency of a word in different text files or across genres;
4. to compare the frequencies of cognate words or translation equivalents between different languages 30;
5. to get a concordance 143 of one or more of the words in your list.

Within **WordList** you can compare two lists 159, or carry out consistency analysis (simple 164 or detailed 162) for stylistic comparison purposes.
These word-lists may also be used as input to the KeyWords 138 program, which analyses the words in a given text and compares frequencies with a reference corpus, in order to generate lists of "key-words" and "key-key-words".

See also: WordList display 188

9.2 index

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See also: WordSmith Main Index 2, WordList display 188

9.3 auto-joining lemmas

The menu option *Auto-Join* can be used to specify a string such as **S** or **S;ED;ING** and will then go through the whole word list, lemmatising all entries where one word only differs from the next by having **S** or **ED** or **ING** on the end of it. (Use **;** to separate multiple suffixes.)

Prefix / Suffix / Infix

By default all strings typed in are assumed to be suffixes; to join prefixes put an asterisk (*****) at the right end of the prefix. If you want to search for infixes (eg. **bloody** in **absobloodylutely** [languages like Swahili use infixes a lot]) put an asterisk at each end.

Examples

S;ED;ING will join **books** to **book, booked** to **book** and **booking** to **book**
***S;*ED;*ING** will join **books** to **book, booked** to **book** and **booking** to **book**
UN*;ED;ING will join **undo** to **do, booked** to **book** and **booking** to **book**
BLOODY will join **absobloodylutely** to **absolutely**

The process can be left to run quickly and automatically, or you can have it confirm with you before joining each one. Automatic lemmatisation, like search-and-replace spell-checking, can produce oddities if just left to run!
To stop in the middle of auto-joining, press Escape.

Tip

With a previously saved list, try auto-joining *without* confirming the changes (or choose *Yes to All* during it). Then choose the Alphabetical (as opposed to Frequency) version of the list and sort

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on Lemmas (by pressing the *Lemmas* heading). You will see all the joined entries at the top of the list. It may be easier to Unjoin 165 (Ctrl + F4) any mistakes than to confirm each one... Finally, sort on the *Word* and save.

See also: Lemmatisation 165

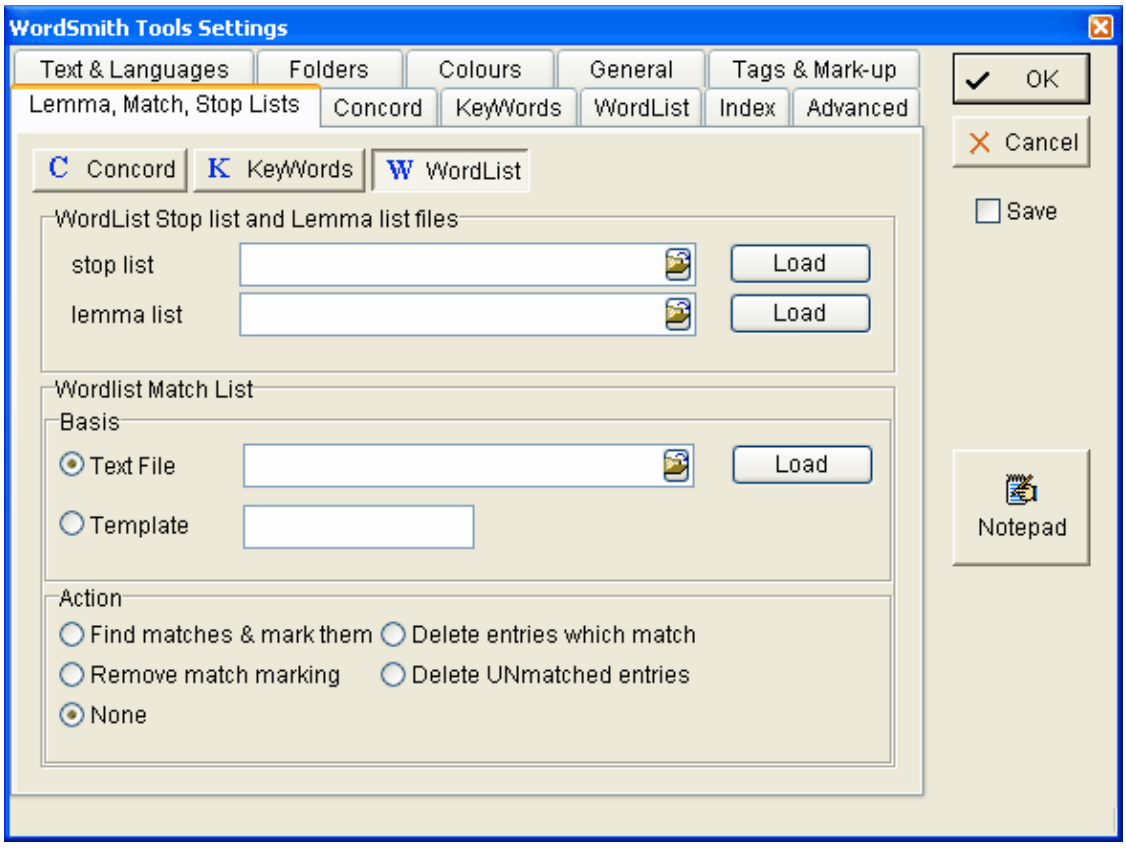
9.4 choosing lemma file

The point of it…

You may choose to lemmatise all items in the current word list using a standard text file which groups words which belong together (be -> was, is, were, etc.). While it is time-consuming producing the text file the first time, it will be very useful if you want to lemmatise lots of word lists, and is much less "hit-and-miss" than auto-joining 157.
There is an English-language lemma list from Yasumasa Someya at http://www.lexically.net/downloads/e_lemma.zip.

How to do it

In the main Controller, *Settings* | *Adjust Settings* | *Lemma,Match,Stop lists*, you will see a screen like this:



Choose the appropriate button (for Concord, KeyWords or WordList) and type the file name or browse for it.

The file should contain a plain text list of lemmas with items like this:

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```
BE -> AM, ARE, WAS, WERE, IS
GO -> GOES, GOING, GONE, WENT
```

WordSmith then reads the file and displays them (or a sample if the list is long). The format allows any alphabetic or numerical characters in the language the list is for, plus the single apostrophe, space, underscore. In other words, if you mistakenly put **GO = GOES** that line won't be included because of the = symbol.

The actual processing of the list only takes place when you choose the menu option *Match Lemmas* ( ) in WordList, Concord or KeyWords. See Match List 57 for a more detailed explanation, with screenshots.

What if my text files don't contain BE?

Suppose you are matching **AM, ARE** etc with **BE** as in the list above, but your texts don't actually contain the word **BE**. WordList won't find it to link to.... The best way around this is to make a new word-list on the basis of a plain text file 182 (in which you include **BE** and any other base forms wanted), save it, and then merge 160 it with your existing wordlist. Now WordList should find the form **BE** to add to it **AM, ARE, WAS** etc.

See also: Lemmatisation 165, Match List 57, Stop List 70

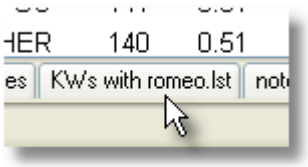
9.5 comparing wordlists

The idea is to help stylistic comparisons. Suppose you're studying several versions of a story, or different translations of it. If one version uses *kill* and another has *assassinate*, you can use this function.

The procedure compares *all the words in both lists* and will report on all those which appear significantly more often in one than the other, including those which appear more than a minimum number of times in one even if they do not appear at all in the other.

How to do it

1. Open a word list.
2. In the menu, choose *File* | *Compare 2 wordlists*.
3. Choose a word list to compare with. You will see the results in one of the tabs at the bottom of the screen.



The minimum frequency (which you can alter in the Controller 4, *Adjust Settings, KeyWords* tab) can be set to 1. If it is raised to say 3, the comparison will ignore words which do not appear at least 3 times in at least one of the two lists.

Choose the significance value (all, or a p value 148 from 0.1 to 0.000001 or what you will). The smaller the p value 148, the more selective the comparison. In other words, a p setting of 0.1 will show more words than a p setting of 0.0001 will.

The display 160 format is similar to that used in KeyWords 138.

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See also: Compute Key Words 164, Consistency Analysis 162, Match List 57

9.6 merging wordlists

The point of it

You might want to merge 2 word lists (or concordances, mutual information lists etc.) with each other if making each one takes ages or if you are gradually building up a master word list or concordance based on a number of separate genres or text-types.

How to do it

With one wordlist (or concordance) opened, choose *File* | *Merge with* and select another.

Be aware that...

Making a merged word list implies that each set of source texts was different. If you choose to merge 2 word lists both of which contained information about the same text file, WordSmith will do as you ask even though the information about the number of occurrences and of texts in which each word-type was found is (presumably) inaccurate.

Merging a list in English with another in Spanish: if you start with the one in Spanish, the one in English will be merged in and henceforth treated as if it were Spanish, eg. in sort order. Presumably if you try to merge one in English with one in Arabic (I've never tried) you should see all the forms but you would get different results merging the Arabic one into the English one (all the Arabic words would be treated as if they were English).

9.7 comparison display

How to get here? by choosing compare two wordlists 159

Here is a comparison window, where we have compared Shakespeare's King Lear with Romeo and Juliet.

The display shows

frequency in the text you started with, here *King Lear,* (with % if > 0.01%) -- then, to the right
frequency in the other text, here *Romeo & Juliet,* (with % if > 0.01%) -- then, to the right
chi-square or log likelihood 147, and p value 148.

The criterion for what counts as "outstanding" is based on the minimum probability value entered before the lists were compared. The smaller this probability value the fewer words in the display.

The words appear sorted according to how outstanding their frequencies of occurrence are. Those near the top are outstandingly frequent in your main wordlist. At the end of the listing you'll find those which are outstandingly infrequent in the first text chosen: in other words, key in the second text.

This comparison is similar to the analysis of "key words" in the KeyWords 138 program. The KeyWords analysis is slightly quicker and allows for batch processing.

The word *Lear* is the most key of all, it scores 304 on the keyness column. (It looks like 04.56

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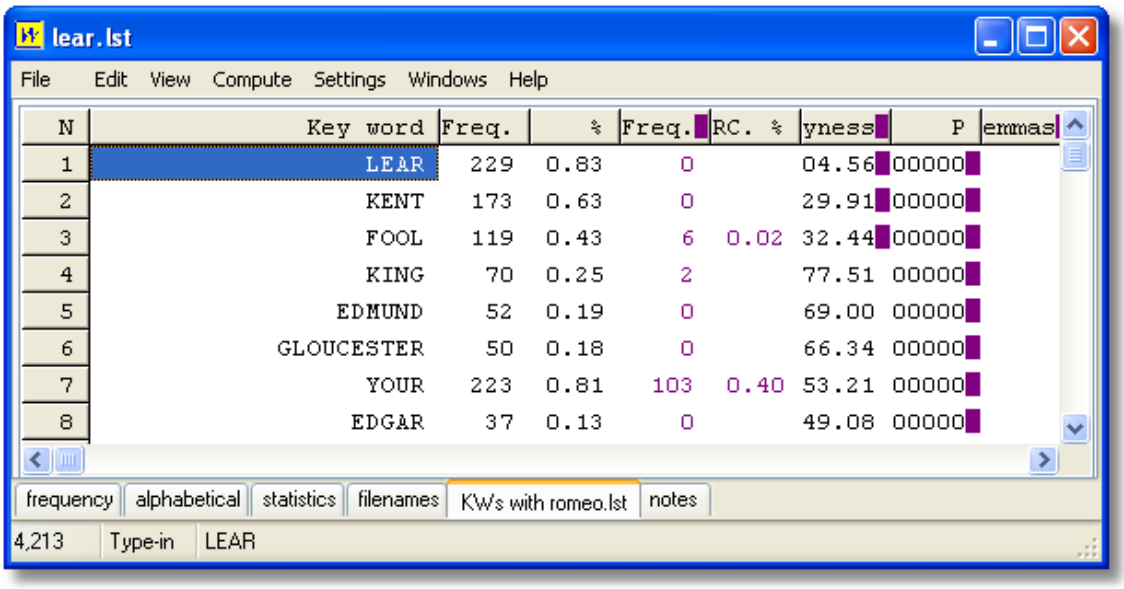
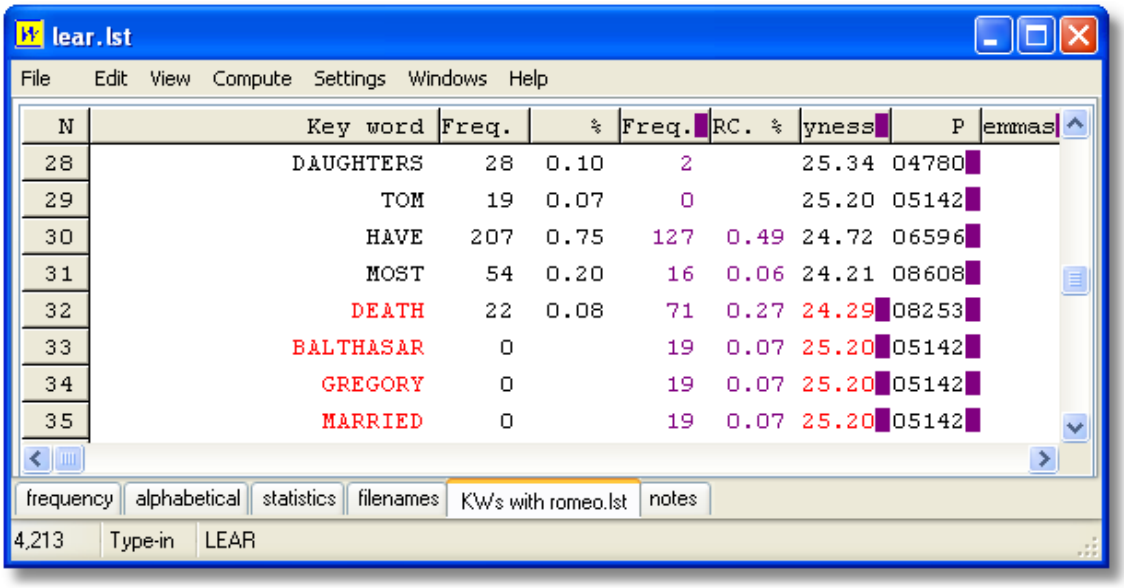
because the column hasn't been pulled any wider.)



The words above, in black, are key to Lear. Below, we see the middle of the listing --- the words in red are those which are key to Romeo. The word **most** is the last key word of Lear, and **death** the least key in Romeo; both have a keyness value of around 25 (positive or negative).



Here at the bottom we see the words which are most key to the play *Romeo and Juliet*.

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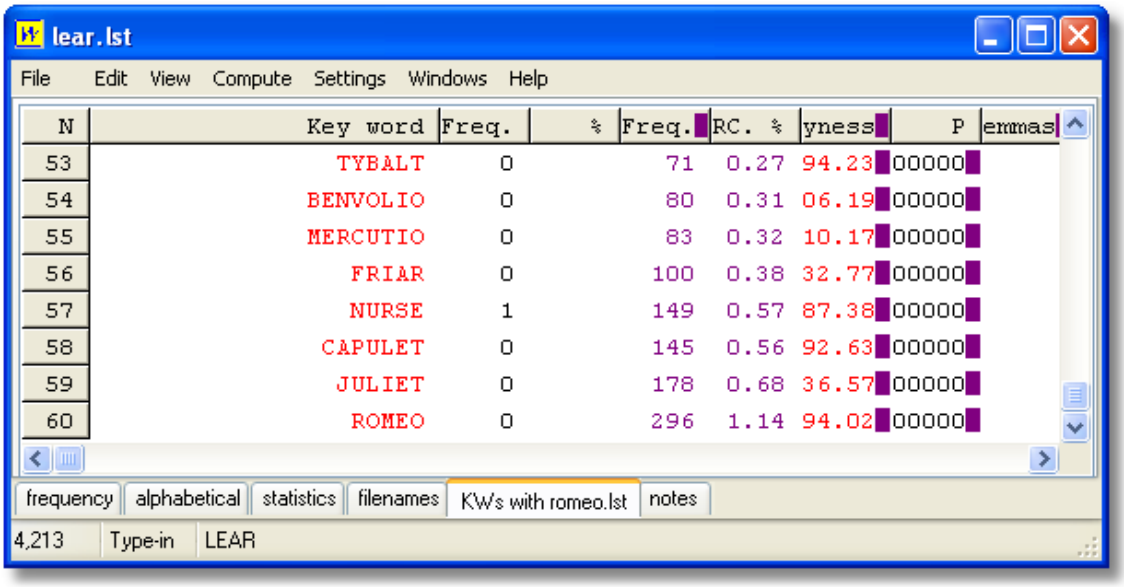


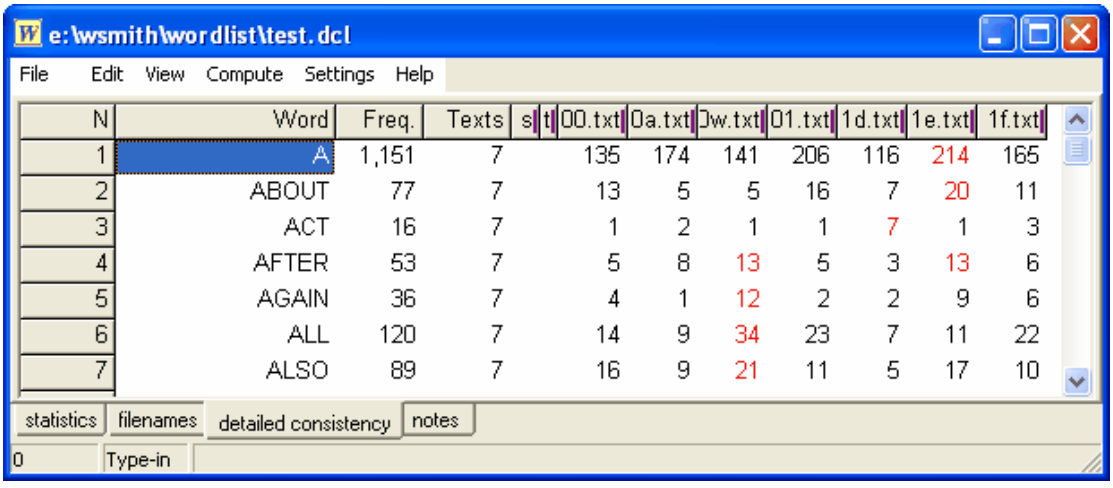
The word which is most outstanding (key) here is Romeo, with a keyness score of 394 (the column needs to be puller wider).

9.8 consistency analysis (detailed)

This function does exactly the same thing as simple consistency 164, but provides much more detail.

The point of it…

The idea is to help stylistic comparisons. Suppose you're studying several versions of a story, or different translations of it. This function enables you to see all the words which are used in the wordlists which you have called up. The display will order the words, so that the first group contains all those which occur in all versions, then those which come in all versions but one, and so on down to those which occur in only one version.



Within each set the words are ordered alphabetically. The Freq. column shows how many instances of each word occurred overall, Texts shows how many text-files it came in. Then there

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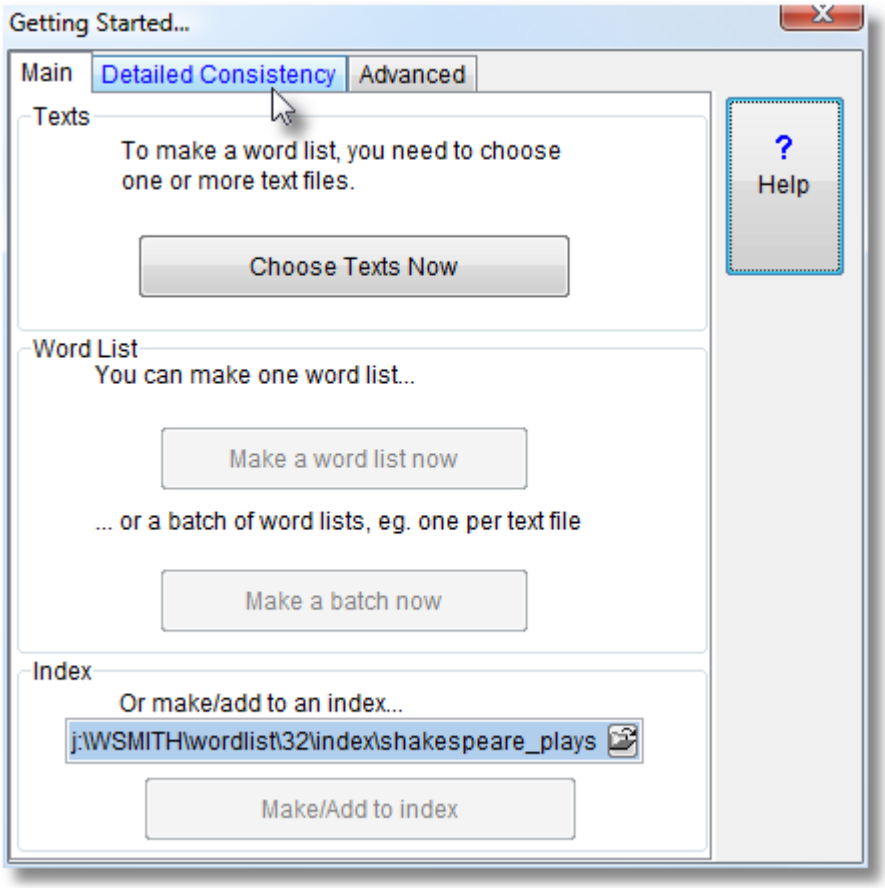
are two columns (No. of Lemmas, and Set which behaves as in a word-list) and then a column for each text. In this case, the word **about** occurred in all 7 texts, it occurred 77 times in all, and it was most frequent in **1e.txt** at 20 occurrences. Statistics and filenames can be seen for the set of 7 texts used here by clicking on the tabs at the bottom. Notes can be edited and saved along with the detailed consistency list.

Note that the filename is test.**dcl** (**d**etailed **c**onsistency **l**ist).
There is no limit except the limit of available memory as to how many text files you can process in this procedure.

How to do it…

In the window you see when you press **New...(** **)** you will be offered a tab showing detailed consistency.



Choose your word-lists and press **compute Detailed Consistency now**.

Each column can be sorted by clicking on its header column (**Word, Freq.** etc.). To get the words which occurred in all 7 texts to the top, I clicked **Texts**.

See also: Consistency Analysis (Simple) 164, Comparison Display 160, Comparing Word-lists 159, Match List 57, Column Totals 38

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9.9 consistency analysis (simple)

This function (termed "range" by Paul Nation) comes automatically with any word-list.

In any word-list you will see a column headed "Texts". This shows the number of texts each word occurred in (the maximum here being the total number of text-files used for the word-list).

The point of it…

The idea is to find out which words recur consistently in lots of texts of a given genre. For example, the word `consolidate` was found to occur in many of a set of business Annual Reports. It did not occur very often in each of them, but did occur much more consistently in the business reports than in a mixed set of texts.
Naturally, words like `the` are consistent across nearly all texts in English. (While working on a set of word lists to compare with business reports, I found one text without **`the`**. I also discovered that one of my texts was in Italian: but this wasn't the one without **`the`**! The culprit was an election results list, which contained lots of instances of **`Cons., Lab.`** and place names, but no instances of **`the`**.)
To analyse common grammar words like `the`, a consistency list may be very useful. Even so, you're likely to find some common lexical items recur surprisingly consistently.

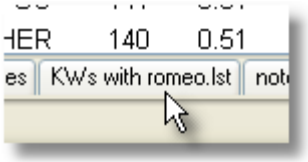
To eliminate the commonly consistent words and find only those which seem to characterise your genre or sub-genre, you need to find out which are significantly consistent. Save your word list, then use it for comparison 159 with others in WordList, or using KeyWords. This way you can determine which are the significantly consistent words in your genre or sub-genre.

See also: Consistency Analysis (Detailed) 162, Comparing Word-lists 159, Match List 57

9.10 compute key words

With a word list visible in the **WordList** tool, you may choose *Compute* | *KeyWords* to get a keywords analysis of the current word list. This will assume you will wish to use the reference corpus 284 defined in the settings 153 for comparison.

You will see the results in one of the tabs at the bottom of the screen.



As in the **KeyWords** tool, this procedure compares all the words in your original word list with those in the reference corpus but does not inform you about words which are only found in the reference corpus.

See also : Compare two wordlists 159

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9.11 lemmas

You may want to store several entries together: e.g. **want; wants; wanting; wanted** as members of the same lemma.

Manual joining

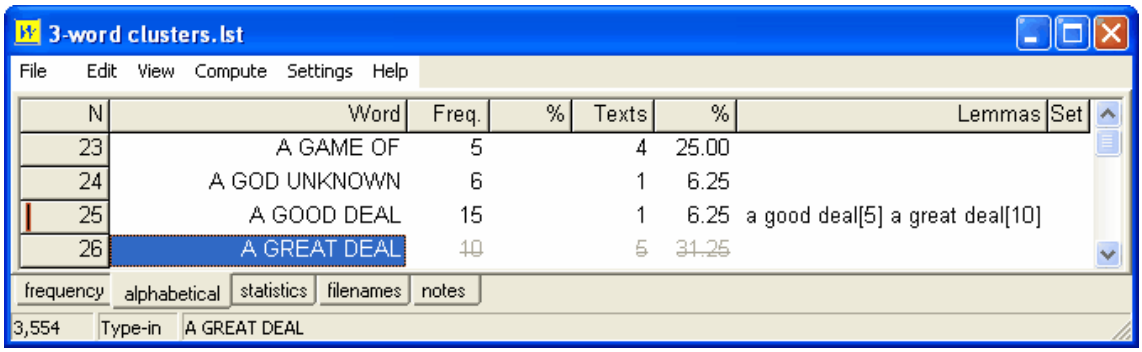
You can simply do this by dragging one entry to another. Suppose your word list has

WANT
WANTED
WANTING

you can simply grab **wanting** or **wanted** with your mouse and place it on **want**.

(See choosing lemma file 158 if you want to join these to a word which isn't in the list)

Both the alphabetical and the frequency lists will be correctly updated, though the frequency list may not reflect the true order until after the file has been re-ordered by zapping entries 74. A lemmatised head entry has a red mark in the left margin beside it. The others you marked will be coloured as if deleted. The linked entries which have been joined to the head can be seen at the right.



Here we see a word list based on 3-word clusters 170 where originally **a good deal** had a frequency of 5, but has been joined to **a great deal** and thereby gained 10.

If you cannot see all the items you want to join in one screen, you can do the same thing using function keys.
1. Use F5 to mark an entry for joining to another. The first one you mark will be the "head". For the moment, while you're still deciding which other entries belong with it, the edge of that row will be marked green. Any entries which you then decide to link with the head (by again pressing F5) will show they're marked too, in white. (If you change your mind you can press F5 again and the marking will disappear.)
2. Use F4 to join all the entries which you've marked. The program will then put the joint frequencies of all the words you've marked with the frequency of the one you marked first (the head).

To Un-join

If you select an item which has lemmas visible at the right and press Control/F4, this will unjoin the entries of that one lemma. To unjoin all lemmatised forms in the entire list, in the menu choose *Edit* | *Join* | *Unjoin All*.

File-based joining

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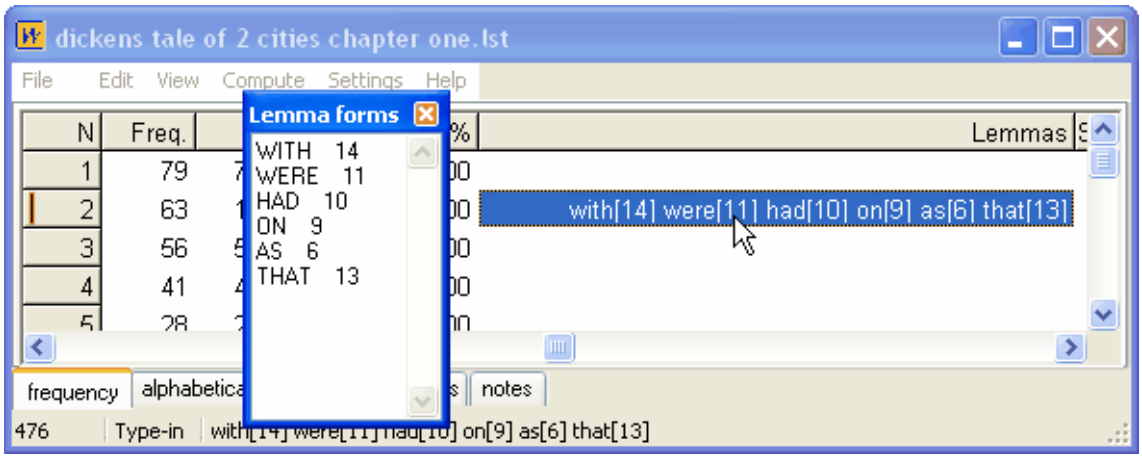
Alternatively you can join up lemmas using a text file 158 which automates the matching & joining process. The actual processing of the list takes place when you choose the menu option *Match Lemmas* ( ) in WordList, Concord or KeyWords. Every entry in your lemma list will be checked to see whether it matches one of the entries in your word list. In the example, if, say, ***am, was***, and ***were*** are found, they will be stored as lemmas of ***be***. If ***go*** and ***went*** are found, then ***went*** will be joined to ***go***.

Auto-joining 157

To speed up this lemmatisation process, you can auto-join any of the entries in your current worldist which meet your criteria.

Can't read all the lemma forms

Double-click on the Lemmas column as in the shot below,



and a window of Lemma Forms will open up, showing the various components.

Different ways of looking at the data

You can also choose to view the data a little differently if you choose

See also: Auto-Join 157, Using a text file to lemmatise 158, selecting multiple entries 284

9.12 index lists: uses

the point of it

1. One of the uses for an Index is to record the positions of all the words in your text file, so that you can subsequently see which word came in which part of each text. Another is to speed up access to these words, for example in concordancing. If you select one or more words in the index and press C, you get a speedy concordance.
2. Another is to compute "Mutual Information" 175 scores which relate word types to each other.
3. Or you can use an index to see word clusters 170.
4. Finally, an index is needed to generate concgram 10 searches.

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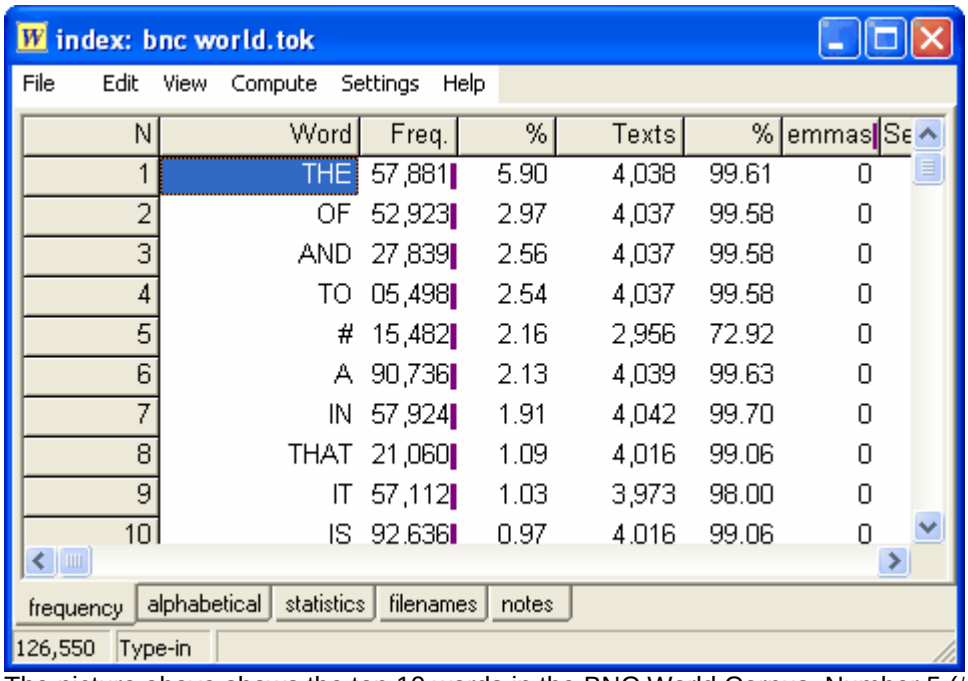
See also Making an Index List 168, Viewing Index Lists 167, WordList Help Contents 156, WSConcgram 10.

9.13 index lists: viewing

In WordList, open an index as you would any other kind of word-list file -- using File | Open. Or, easier in my opinion, in the Controller | Previous lists, choose any index you've made and double-click it. You will see the index as if it were a large word-list.



The picture above shows the top 10 words in the BNC World Corpus. Number 5 (#) represents numbers or words which contain numbers such as £50.00. These very frequent words are also very consistent -- they appear in at least 99% of the 4,054 texts of BNC World edition.
In the view below, you see words sorted by the number of Texts: all these words appeared 10 times in the corpus but their frequencies vary.

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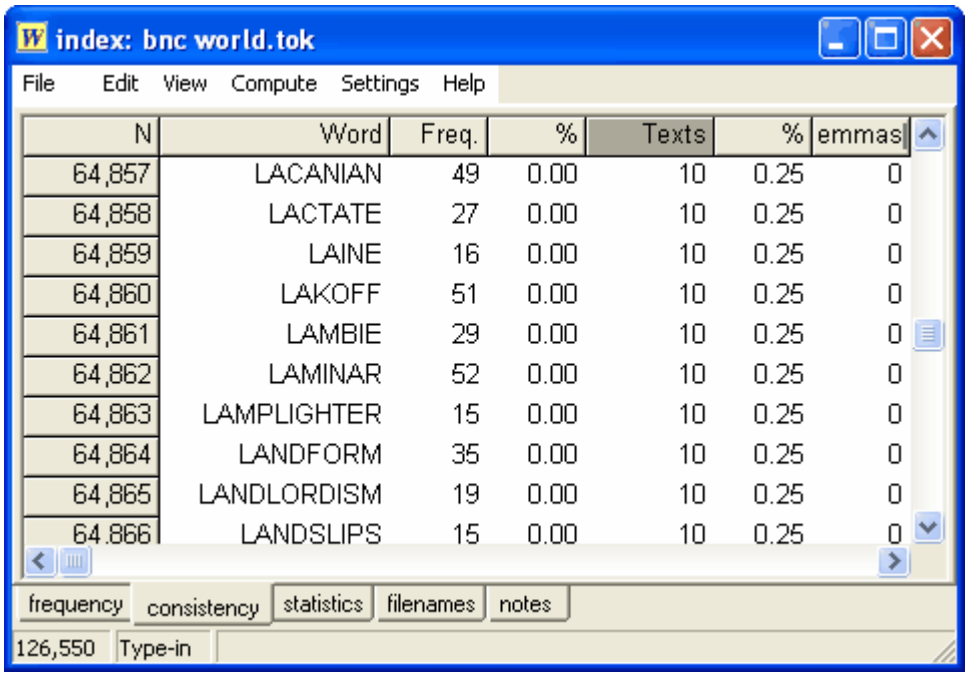

You can highlight one or more words or mark them with the option, then to get a speedy concordance.

See also Making an Index List 168, WordList clusters 170, WordList Help Contents 156.

9.14 making a WordList Index

The process is just like the one for making a word-list except that after choosing your texts and ensuring you like the index filename, you choose the bottom button here:

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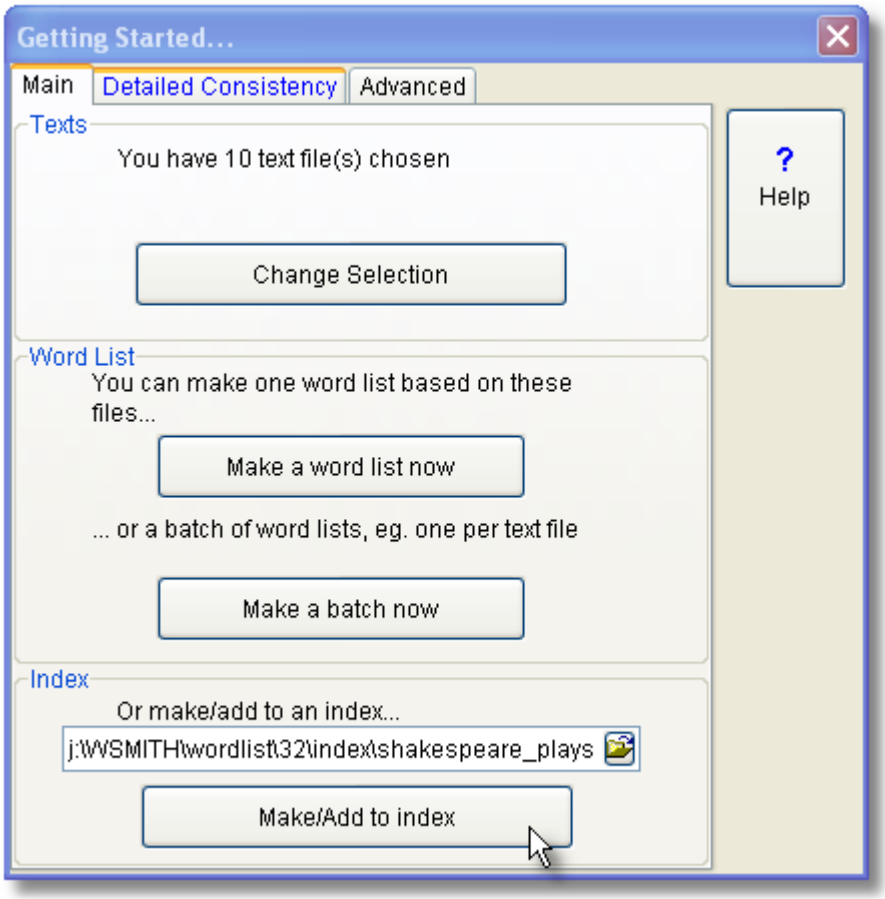
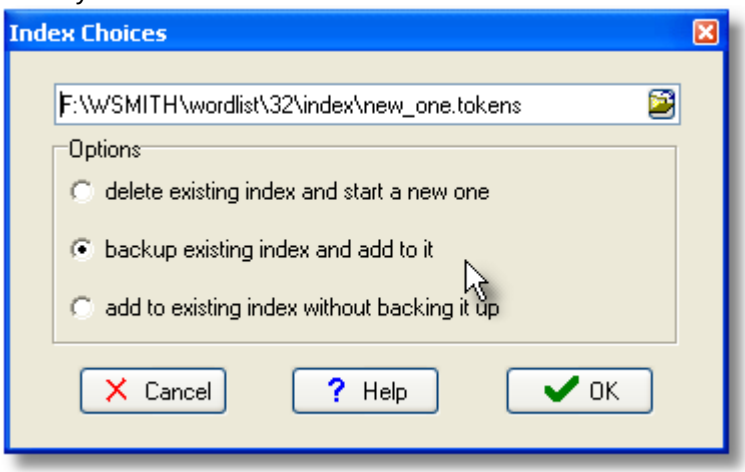


In this screenshot above, the basic filename is **`shakespeare_plays`**: WordSmith will add **`.tokens`** and **`.types`** to this basic filename as it works. Two files are created for each index:
`.tokens` file: a large file containing information about the position of every word token in your text files.
`.types` file: knows the individual word types.

If you choose an existing basic filename which you have already used, **WordList** will check whether you want to add to it or start it afresh:



An index permits the computation of word clusters 170 and Mutual Information 175 scores for each word type. The screenshot below shows the progress bars for an index of the BNC World corpus;

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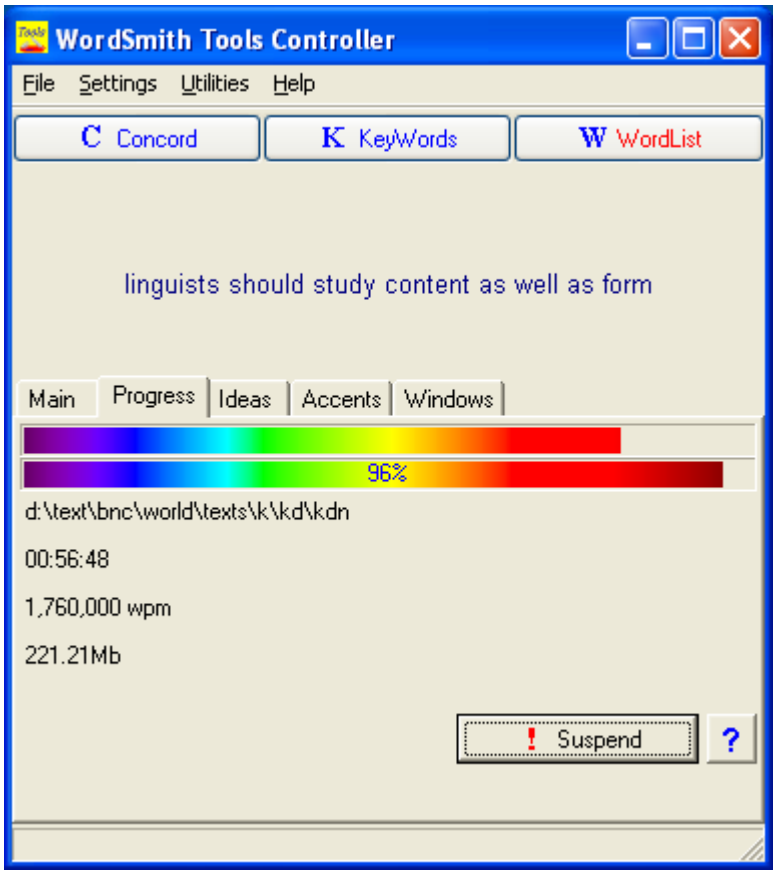
a few years ago on a desktop PC with 1GB of RAM it has taken nearly one hour to do 96% of the work: a rate of about 1.8 million words per minute. The resulting **BNC Words.tokens** file was 1.6GB in size and the **BNC Words.types** file was 26 MB. On a basic laptop of the same vintage with 512MB of RAM it took about 3 hours 15 minutes.



adding to an index

To add to an existing index, just choose some more texts and choose *File* | *New* | *Index*. If the existing filename is already in use for an index, you will be asked whether to add more or start it afresh as shown above.

See also Using Index Lists 166, Viewing Index Lists 167, WordList Help Contents 156.

9.15 index clusters

WordList clusters

A word list doesn't need to be of single words. You can ask for a word list consisting of two, three, up to eight words on each line. To do cluster processing in WordList, first make an index 168.

How to see clusters…

Open 167 the index. Now choose *Compute* | *Clusters*.

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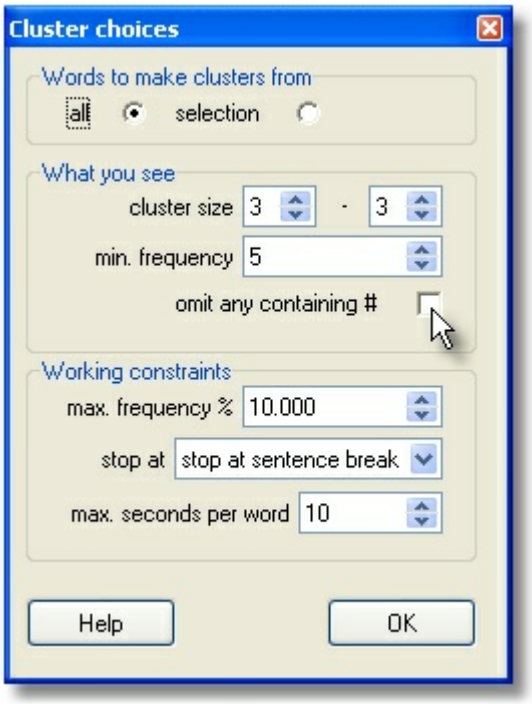

Words to make clusters from

- "all" : all the clusters involving all words above a certain frequency (this will be s-l-o-w for a big corpus like the BNC World edition), or
- "selection": clusters only for words you've selected (eg. you have highlighted BOOK and BOOKS and you want clusters like **book a table, in my book**).

To choose words which aren't next to each other, press Control and click in the number at the left -- keep Control held down and click elsewhere. The first one clicked will go green and the others white. In the picture below, using an index of the BNC World corpus, I selected **world** and then **life** by clicking numbers 164 and 167.

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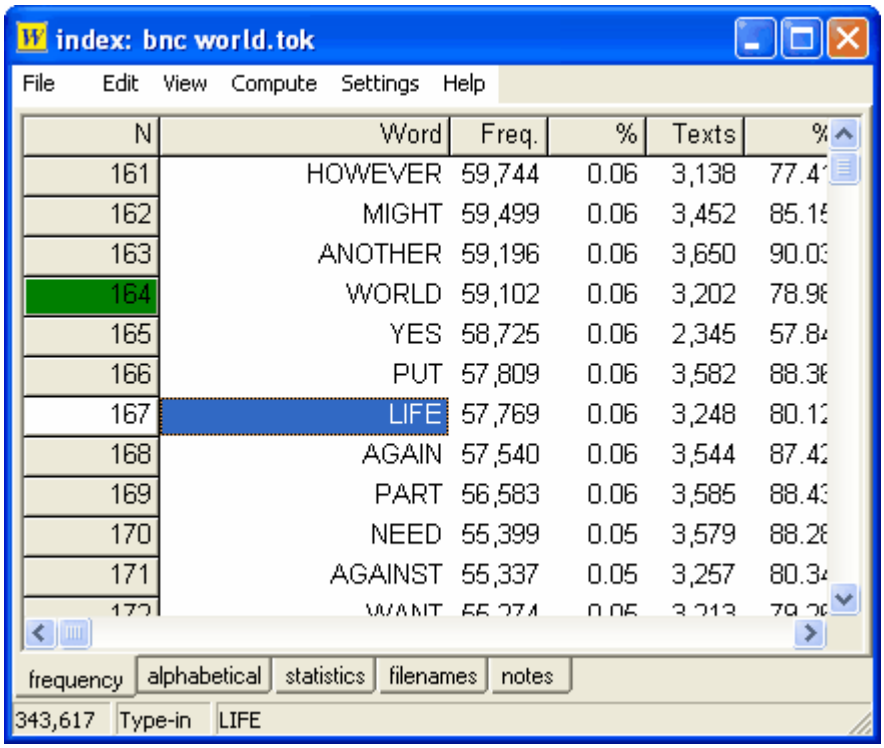

The process will take time. In the case of BNC World, the index knows the positions of all of the 100 million words. To find 3-word clusters, in the case above, it took about a minute to process all the 115,000 cases of **world** and **life** and find 5,719 clusters like **the world bank** and **of real life**. Chris Tribble tells me it took his PC 36 hours to compute all 3-word clusters on the whole BNC ... he was able to use the PC in the meantime but that's not a job you're going to want to do often.

What you see

The "cluster size" must be between 2 and 8 words.
The "min. frequency" is the minimum number of each that you want to see.
Here the user has chosen to see any 3-word clusters that appear 5 or more times.

Working constraints

The "max. frequency %" setting is to speed the process up. It means the maximum frequency percentage which the calculation of clusters for a given word will process. This is because there are lots and lots of the very high frequency items and you may well not be interested in clusters which *begin* with them. For example, the item **the** is likely to be about 6% of any word-list (about 6 million of them in the BNC therefore), and you might not want clusters starting **the...** -- if so, you might set the max. percent to 0.5% or 0.1% (which for the BNC World corpus will cut out the top 102 frequency words). You will still get clusters which include very high frequency items in the middle or end, like the **a** in **book a table**, but would not get **in my book**, which begins with the very high frequency word **in**. The more words you include, the longer the process will take....
Max. seconds per word is another way of controlling how long the process will take. The default (0) means no limit. But if you set this e.g. to 30 then as WordList processes the words in order, as soon as one has taken 30 seconds no further clusters will be collected starting with that word.

Stop at, like Concord clusters 101, offers a number of constraints, such as sentence and other punctuation-marked breaks. The idea is that a 5-word cluster which starts in one sentence and

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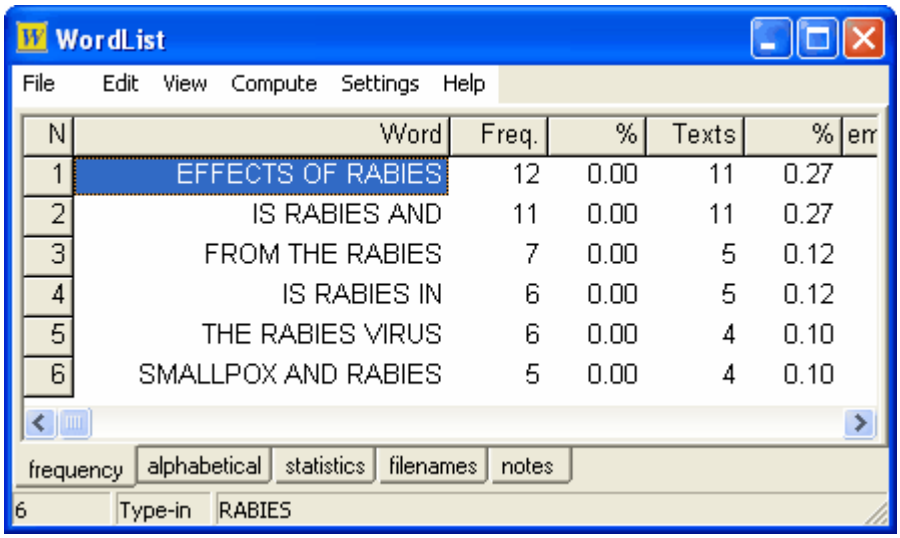
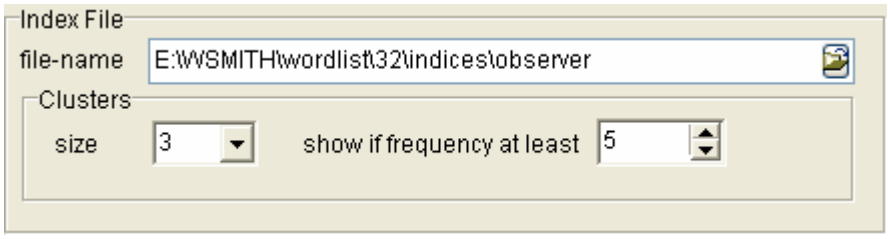
continues in the next is not likely to make much sense.

What they look like



Here is a small set of 3-word clusters involving rabies from the BNC World corpus. Some of them are plausible multi-word units. All clusters which appear at least 5 times are shown: to alter that setting, choose *Adjust Settings* | *Index* in the Controller and set the "show if frequency.." number thus:



See also: clusters in Concord 285

9.16 join clusters

The idea is to group clusters like

I DON'T THINK
NO I DON'T THINK
I DON'T THINK SO
I DON'T THINK THAT
etc.

You can join them up in a process like lemmatisation 165, either so that the smaller clusters get merged as 'lemmas' of a bigger one, or so that the smaller ones end up as 'lemmas'.

In this screenshot, shorter clusters have been merged with longer ones so that **A BEARING OF FORTY-FIVE DEGREES** relates to several related clusters:

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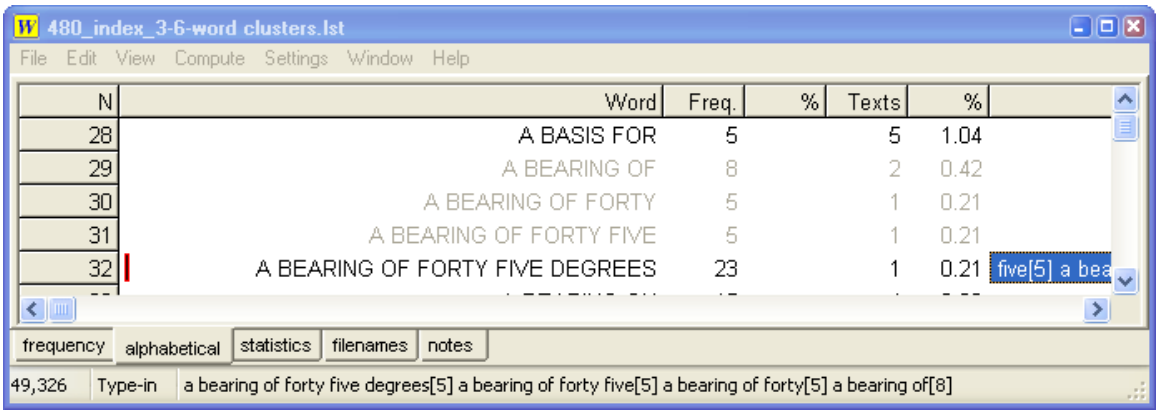
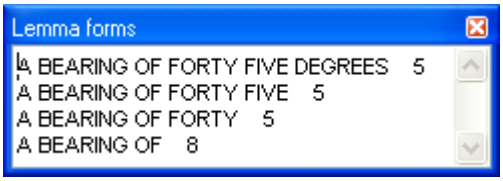


visible by double-clicking the lemmas to show something like this:



How to do it

Choose *Edit* | *Join* | *Join Clusters* in the WordList menu. The process takes quite a time because each cluster has to be compared with all those in the rest of the list; interrupt it if necessary by pressing Suspend 70.

9.17 menu search

Using the menu you can search for a sub-string within an entry -- e.g. all words containing "fore" (by entering ***fore*** -- the asterisk means that the item can be found in the middle of a word, so ***fore*** will find *before* but not *beforehand*, while ***fore*** will find them both). These searches can be repeated.
This function enables you to find parts of words so that you can edit your wordlist, e.g. by joining two words as one.
You can search for ends or middles of words by using the * wildcard.
Thus ***TH*** will find *other, something*, etc.
***TH** will find *booth, sooth*, etc.
You can then use **F8** to repeat your last search.
The search hot keys are:

F8 repeat last search (use in conjunction with F10 or F11)

F10 search forwards from the current line

F11 search backwards from the current line

F12 search starting from the beginning

This function is handy for lemmatization 165 (joining words which belong under one entry, such as *seem/ seems/ seemed/ seeming* etc.)
See also: searching for an entry by typing 68

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9.18 mutual information scores

the point of it

A Mutual Information (MI) score relates one word to another. For example, if *problem* is often found with *solve*, they may have a high mutual information score. Usually, *the* will be found much more often near *problem* than *solve*, so the procedure for calculating Mutual Information takes into account not just the most frequent words found near the word in question, but also whether each word is often found elsewhere, well away from the word in question. Since *the* is found very often indeed far away from *problem*, it will not tend to be related, that is, it will get a low MI score.

There are several other alternative statistics: you can see examples of how they differ here 178.

This relationship is bi-lateral: in the case of *kith* and *kin*, it doesn't distinguish between the virtual certainty of finding *kin* near *kith*, and the much lower likelihood of finding *kith* near *kin*.

There are various different formulae for computing the strength of collocational relationships. The MI in WordSmith ("specific mutual information") is computed using a formula derived from Gaussier, Lange and Meunier described in Oakes 262, p. 174; here the probability is based on total corpus size in tokens. Other measures of collocational relation are computed too, which you will see explained under Mutual Information Display 178.

Settings

The Mutual Information settings are found in the Controller 4 under *Adjust Settings* | *Index* 195 or in a menu option in **WordList**.

See also: Mutual Information Display 178, Computing Mutual Information 176, Making an Index List 168, Viewing Index Lists 167, WordList Help Contents 156.

See Oakes 262 for further information about Mutual Information.

9.19 recompute tokens

Why recompute the tokens?

To compute relations such as Mutual Information 178 or Keyness 147 we need an estimate of the total number of running words (let's call it TNR) in the text corpus from which the data came. It is tricky to decide what actually counts as the TNR. Not only are there problems to do with hyphenation 72, apostrophes and other non-letters 72 in the middle of a word, numbers 72, words cut out because of a stoplist 70 etc, but also a decision whether TNR should in principle include all of those or in principle include *only* the words or clusters now in the list in question. In practice for single-word word lists this usually makes little difference. In the case of word clusters, however, there might be a big difference between the TNR words and TNR clusters, and anyway what exactly is meant by running clusters of words if you think about how they are computed 285?

For most normal purposes, the total number of running words (tokens) computed when the word list or index was created will be used for these statistical calculations.

Where is the setting?

Under *settings | index* 195.

What it affects

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Any decision made here will apply equally both to the node and the collocate whether these are clusters or single words, or to the little word-list and the reference corpus word-list in the case of key words calculations.

If you do choose to recompute the token count, then the TNR will be calculated as the total of the word or cluster frequencies for those entries still left in the list. After any have been zapped or if a minimum frequency above 1 is used the difference may be quite large.

If you choose *not* to recompute, the total number of running words (tokens) computed when the word list or index was created will be used.

9.20 relationships computing

In WordList or in Concord

In Concord

MI (or other relevant statistic 178) is not computed by default for a collocate list. To compute the statistic you want, you need a word list to supply the relevant data.
Suppose you have made a concordance using all the files in **`c:Program Files\wsmith5\text\shakespeare`** and have done a concordance on *love*. You get collocates such as *Romeo, hate, the, Juliet, Nurse* etc. All these show a "Relation" score of "??" because they haven't yet been computed.
If you haven't done so yet, use WordList to make a word list of the same text files (or if you prefer, use some other reference corpus 284). Make sure the reference corpus 284 file is what you prefer.

Now choose the menu item and Concord will use the reference corpus filename. It will look up each of your collocates in the word list and compute MI using the information in the reference corpus word list. You can choose a different statistic in the main Controller Concord settings 133.

In WordList

To compute all these relationship statistics you need a WordList Index 168. Call up the alphabetical view 167 of the list.

When you press , you can choose whether to compute the statistics for selected (highlighted) entries, for all entries, or for those between two initial characters e.g. between A and D.

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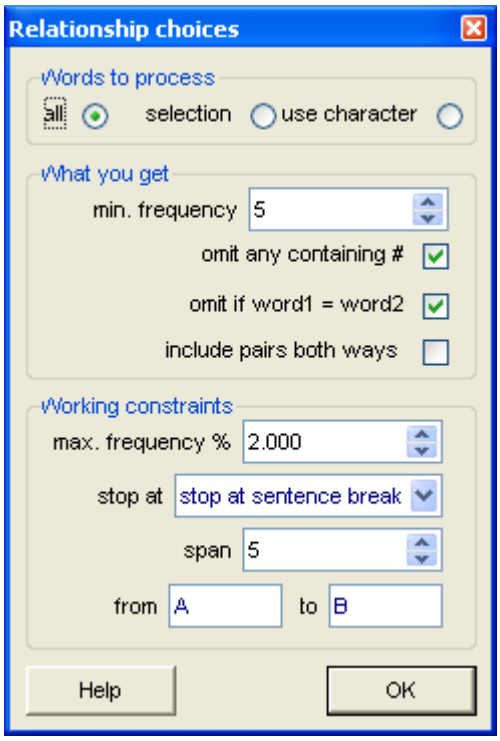

If you wish to select only a few items for MI calculation, you can mark them first (with).

You can always do part of the list (eg. A to D) and later merge your mutual-information list with another (E to H).

What you get: set the minimum frequency to suit the frequency, e.g. 5 means that no word of frequency 4 or less in the index will be visible in the MI results. *Omit #* means no numbers will be considered, and *omit if word1=word2* is there because you might find that **GOOD** is related to **GOOD** if there are lots of cases where these 2 are found near each other. *Include pairs both ways* allows you to locate all the pairs more easily because it doubles up the list. For example, suppose we have a pair of words such as **HEAVEN** and **EARTH**. This will normally enter the list only in one order, let us say **HEAVEN** as word 1 and **EARTH** as word 2. If you're looking at all the words in the Word 1 column, you will not find **EARTH**. If you want to be able to see the pair as both **HEAVEN** - **EARTH** and **EARTH** - **HEAVEN**, select *include pairs both ways*.

Working constraints: this is to set things so that the process doesn't take forever, as explained below. *Max. frequency* = ignore high frequency words which would occur say at 0.5% frequency. (Above 0.5% in the case of the BNC would mean ignoring about 20 of the top frequency words, such as **WITH, HE, YOU**. Above 0.1% would cut about 100 words including **GET, BACK, BECAUSE**.)
Stop at has to do with whether breaks such as punctuation or sentence breaks determine that one word cannot be related to another; to suit the frequency, e.g. 5 means that no word of frequency 4 or less in the index will be used in the MI results. *Span* is how far left and right to look for the MI relation. *From A to A* is where you choose a range of words starting with those characters.

Computing the MI score for each and every entry in an index takes a long time: it took over an hour to compute MI for all words beginning with B in the case of the BNC World edition (written, 90 million words) in the screenshot below, using the settings visible above. It might take 24 hours to process the whole BNC, 100 million words, even on a modern powerful PC. Don't forget to save your results afterwards!

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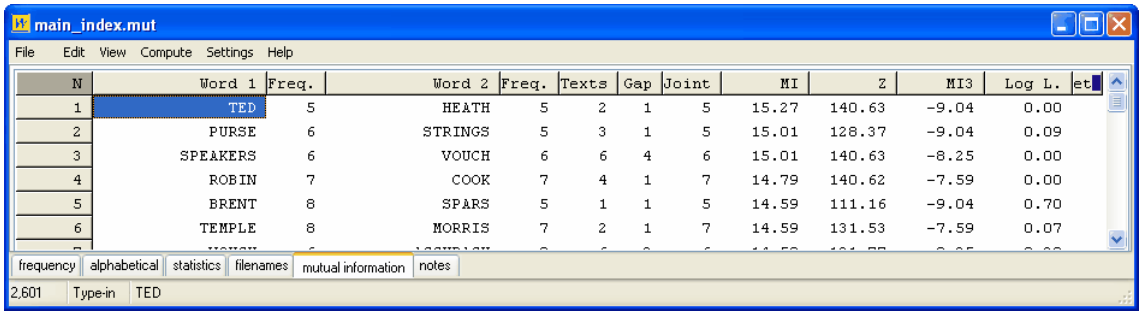
	Word 1	Freq.	Word 2	Freq.	Texts	Gap	Joint	MI	z
19,642	BUDGETS	1,171	CONTRACTS	4,327	4	2	5	6.44	5.84
19,643	BUDIMIR	13	LONCAR	17	8	1	10	21.93	1,997.88
19,644	BUDS	404	STAR	6,817	3	3	5	7.32	8.39
19,645	BUDS	404	FLOWERS	5,036	5	2	5	7.76	9.93
19,646	BUDS	404	FRUIT	3,799	4	2	5	8.17	11.57
19,647	BUDS	404	SHOOTS	567	6	2	6	11.17	37.07
19,648	BUENA	9	VISTA	158	4	1	5	18.24	393.80
19,649	BUENAS	8	NOCHES	6	3	1	5	23.13	2,143.48
19,650	BUENOS	210	MARCH	15,686	4	3	5	7.06	7.57
19,651	BUENOS	210	AIRES	201	94	1	176	18.49	2,544.25
19,652	BUFF	282	WHITE	23,786	3	3	7	6.52	7.18
19,653	BUFF	282	COLOURED	3,295	13	1	15	10.48	45.89
19,654	BUFF	282	BROWN	8,328	3	1	7	8.04	13.05
19,655	BUFF	282	ENVELOPE	1,183	8	1	9	11.22	46.09
19,656	BUFFALO	307	YORK	7,899	5	2	5	7.51	9.01
19,657	BUFFALO	307	TOM	4,668	4	1	7	8.75	16.96
19,658	BUFFALO	307	BILL	12,184	7	1	9	7.73	13.17
19,659	BUFFALO	307	BILLS	2,820	6	1	8	9.67	25.22

See also Collocates 100, Mutual Information Settings 175, Mutual Information Display 178, Making an Index List 168, Viewing Index Lists 167, Recompute Token Count 175, WordList Help Contents 156.

9.21 relationships display

The "Mutual Information" procedure contains a number of columns and uses various formulae 273:



Word 1: the first word in a pair, followed by Freq. (its frequency in the whole index).
Word 2: the other word in that pair, followed by Freq. (its frequency in the whole index).
Texts: the number of texts this pair was found in (there were 56 in the whole index).
Gap: the most common distance between Word 1 and Word 2.
Joint: their joint frequency.

In line 2 of this display, PURSE occurs 6 times in the whole index, and STRINGS 5 times. They occur together 5 times -- in other words in this little corpus, **strings** is always part of the combination **purse + strings**. The gap is 1 because **strings** comes 1 word away from **purse**. The pair **purse strings** comes in 3 texts.

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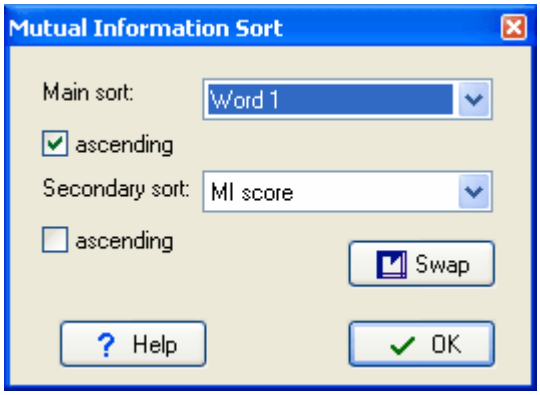
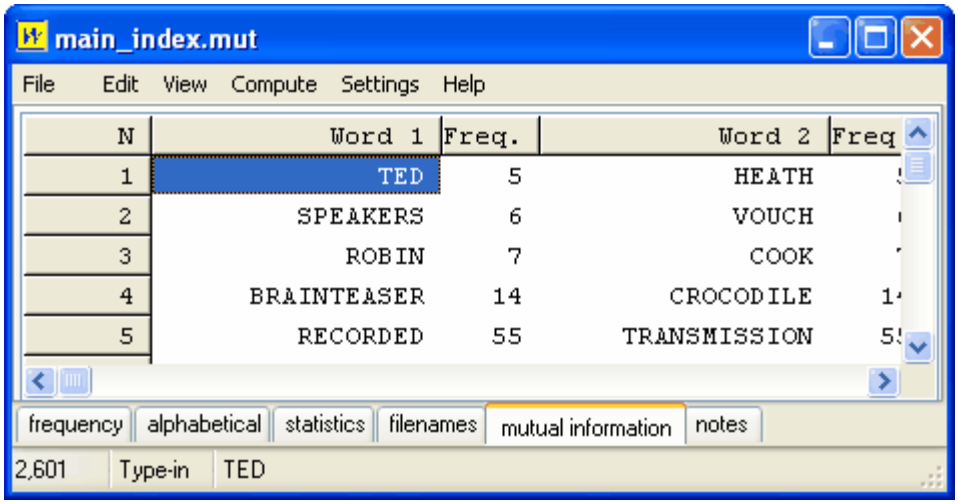
As usual, the data can be sorted by clicking on the headers. Above, it was sorted by clicking on "MI" first and "Word 1" second.



You get a double sort, main and secondary, because sometimes you will want to see how MI or Z score or other sorting affects the whole list and sometimes you will want to keep the words sorted alphabetically and only sort by MI or Z score within each word-type. Press *Swap* to switch the primary & secondary sorts.

Compare this with the display sorted by Z Score (Oakes 262 p. 163).



TED HEATH (a UK Prime Minister of the 1970s) is still top and SPEAKERS ... VOUCH still visible, but some other items have moved in.

Here is the display sorted by MI3 Score (Oakes 262 p. 172):

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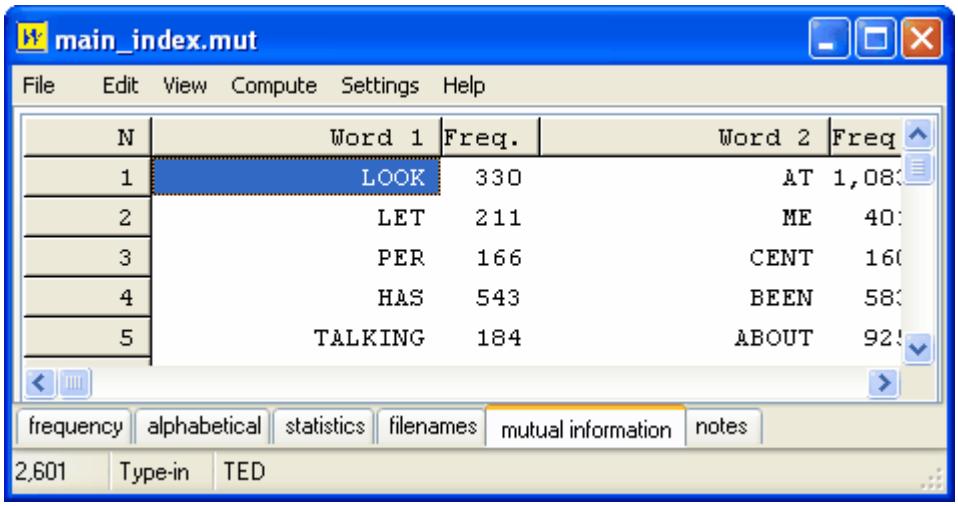
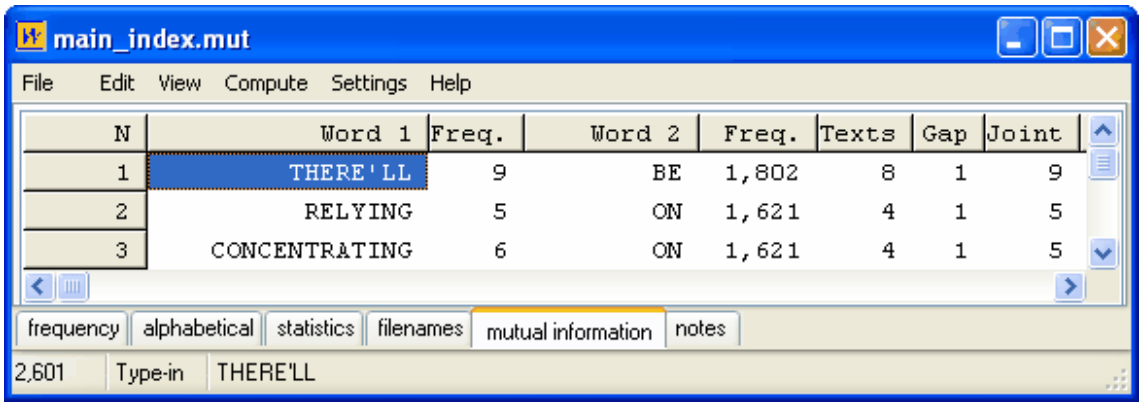


Much more frequent items have jumped to the top.

Finally, by Log Likelihood (Dunning 262, 1993):



Here the Word 2 items are very high frequency ones and we get at colligation (grammatical collocation).

See also: Formulae 273, Mutual Information 175, Computing Mutual Information 176, Making an Index List 168, Viewing Index Lists 167, WordList Help Contents 156.

See Oakes 262 for further information about Mutual Information.

9.22 re-sorting: consistency lists

The frequency-ordered consistency display can be re-sorted by
alphabetical order (Word)
total frequencies overall (Total, the default)
by the *frequencies* in any given file (you see the file names).
Click on Word, Total or a filename to choose.
The sort can be either ascending or descending, the default being descending.

See also: Sorting word-lists 186

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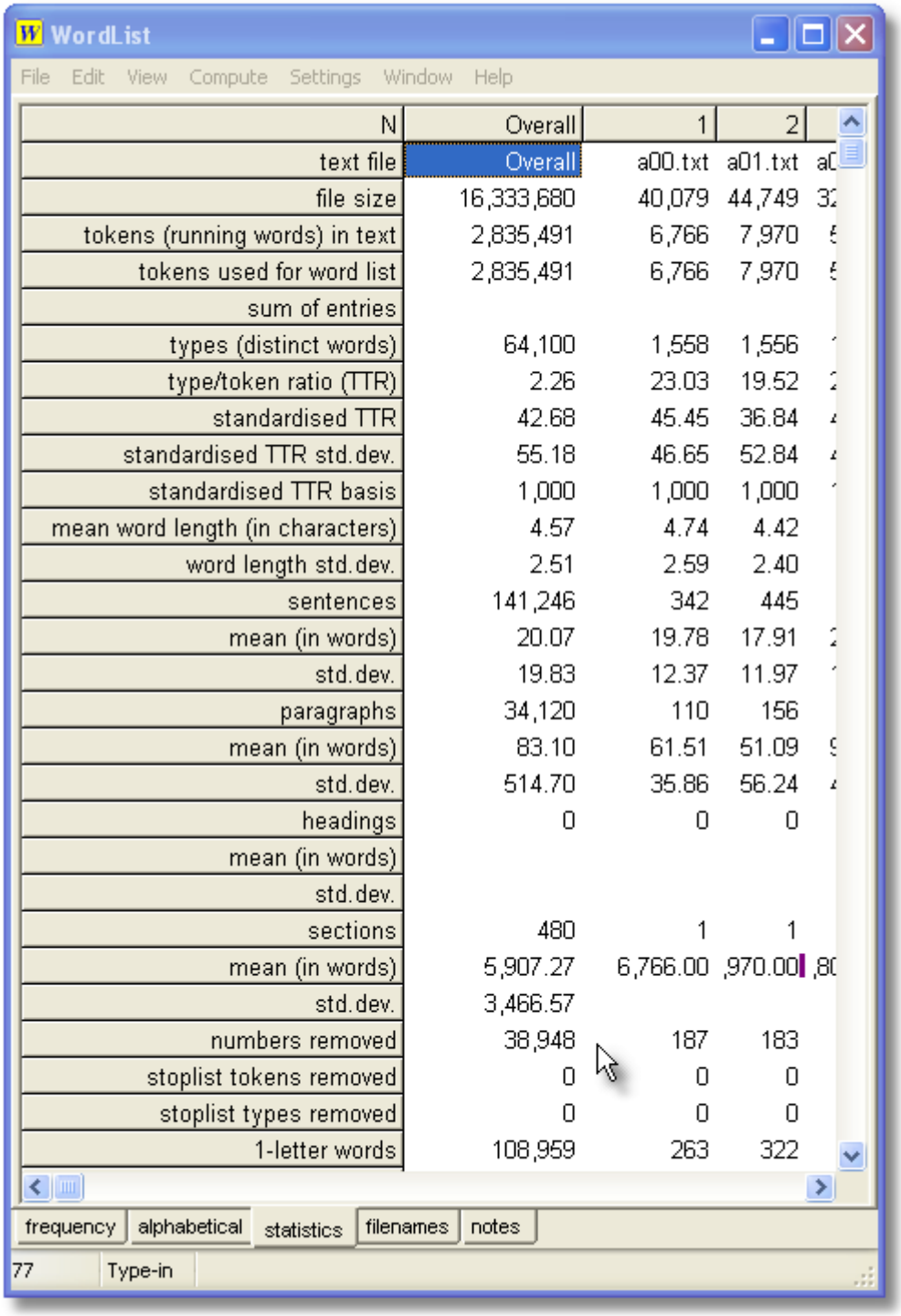
9.23 statistics

Visible by clicking the Statistics tab at the bottom of a **WordList** window:



N	Overall	1	2	
text file	Overall	a00.txt	a01.txt	a0
file size	16,333,680	40,079	44,749	32
tokens (running words) in text	2,835,491	6,766	7,970	5
tokens used for word list	2,835,491	6,766	7,970	5
sum of entries				
types (distinct words)	64,100	1,558	1,556	1
type/token ratio (TTR)	2.26	23.03	19.52	2
standardised TTR	42.68	45.45	36.84	4
standardised TTR std.dev.	55.18	46.65	52.84	4
standardised TTR basis	1,000	1,000	1,000	1
mean word length (in characters)	4.57	4.74	4.42	
word length std.dev.	2.51	2.59	2.40	
sentences	141,246	342	445	
mean (in words)	20.07	19.78	17.91	2
std.dev.	19.83	12.37	11.97	1
paragraphs	34,120	110	156	
mean (in words)	83.10	61.51	51.09	9
std.dev.	514.70	35.86	56.24	4
headings	0	0	0	
mean (in words)				
std.dev.				
sections	480	1	1	
mean (in words)	5,907.27	6,766.00	,970.00	,8(
std.dev.	3,466.57			
numbers removed	38,948	187	183	
stoplist tokens removed	0	0	0	
stoplist types removed	0	0	0	
1-letter words	108,959	263	322	

The overall results are in the left column, and details for the individual text files follow in

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columns to the right. In the screenshot you can see that the average sentence length of the 480 texts overall is 26.47 words, while that of text **A00.txt** is 25.17.

Statistics include:
number of files involved in the word-list
file size (in bytes, i.e. characters)
running words in the text (***tokens***)
tokens used in the list (would be affected by using a stoplist 70 or changes to minimum settings 185)
sum of entries: choose *Compute* | *Tokens* to see, otherwise this will be blank
no. of different words (***types***)
type/token ratios 184
no. of sentences 86 in the text
mean sentence length (in words)
standard deviation of sentence length (in words)
no. of paragraphs 86 in the text
mean paragraph length (in words)
standard deviation of paragraph length (in words)
no. of headings 86 in the text (here 0 because WordSmith didn't know how to recognise headings)
mean heading length (in words)
no. of sections 86 in the text (here 480 because WordSmith only noticed 1 section per text)
mean section length (in words)
standard deviation of heading length (in words)
numbers 72 removed
stoplist 70 tokens and types removed
the number of 1-letter words
...
the number of **n**-letter words (to see these scroll the list box down)
(14 is the default 65 maximum word length. But you can set it to any length up to 50 letters in Word List Settings, in the Settings menu.) Longer words are cut short but this is indicated with a + at the end of the word.
The number of types (different words) is computed separately for each text. Therefore if you have done a single word-list involving more than one text, summing the number of types for each text will not give the same total as the number of types over the whole collection.

See also : WordList display 188 (with a screenshot), Summary Statistics 40, Starts and Ends of Text Segments 86.

9.24 import words from text list

the point of it

You might want a word list based on some data you have obtained in the form of a list, but whose original texts you do not have access to.

requirements

Your text file can be in any language 30 (select this before you make the list), and can be in Unicode or ASCII.
But it must follow a similar format as a stop list 70 expects, except that following each word there must be a <tab> character and the frequency as a plain number (decimal points will be ignored). Do not use commas as a thousands delimiter as otherwise they'll be interpreted as different words. The words do not need to be in frequency or alphabetical order.

Example

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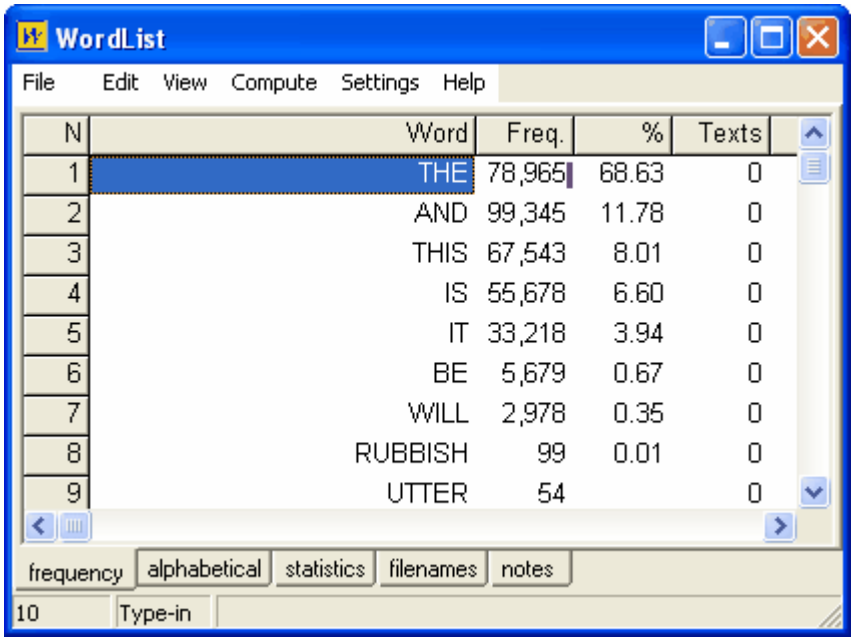
```
; My word list for test purposes.
THIS 67543
IT   33218
WILL 2978
BE   5679
COMPLETE   45
AND  99345
UTTER            54
RUBBISH    99
THE  578965
IS   55678
```

You should get results like these.



Statistics are calculated in the simplest possible way: the word-lengths (plus mean and standard deviation), and the number of types and tokens. Most procedures need to know the total number of running words (tokens) and the number of different word types so you should manage to use the word-list in KeyWords etc.

The total is computed by adding the frequencies of each word-type (67543+33218+2978 etc. in the example above).
Optionally, a line can start **\TOTAL=** and contain a numerical total, eg.
`\TOTAL=\  299981`
In this case the total number of tokens will be assumed to be 299981, instead.

how to do it

When you choose the *New* menu option ( ) in WordList you get a window offering three tabs: a *Main* tab for most usual purposes,

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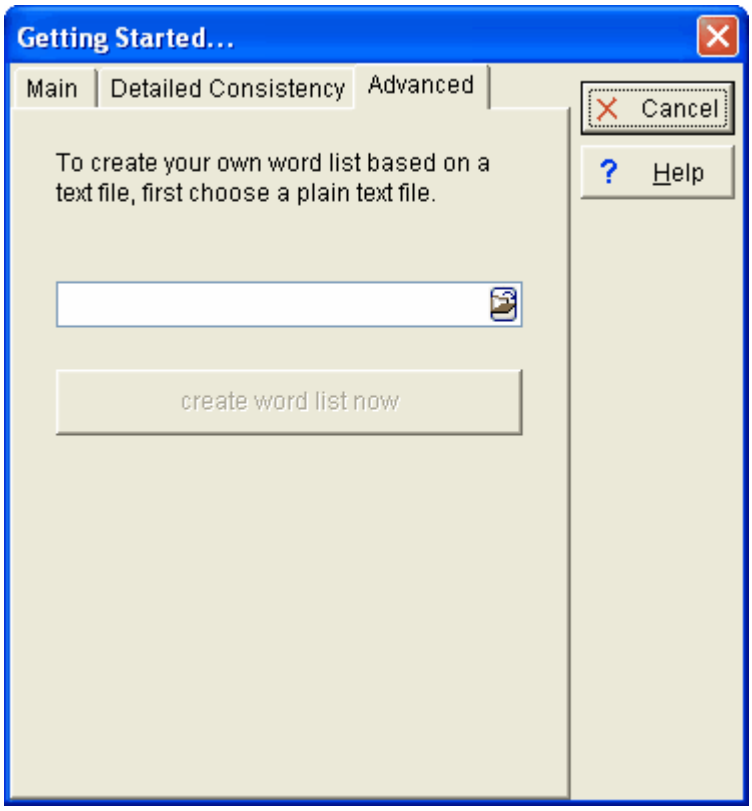

one for *Detailed Consistency* 162, and another (*Advanced*) for creating a word list using a plain text file.

Choose your .txt file and press *create word list now*.

9.25 type/token ratios

If a text is 1,000 words long, it is said to have 1,000 "tokens". But a lot of these words will be repeated, and there may be only say 400 different words in the text. "Types", therefore, are the different words.
The ratio between types and tokens in this example would be 40%.
But this type/token ratio (TTR) varies very widely in accordance with the length of the text -- or corpus of texts -- which is being studied. A 1,000 word article might have a TTR of 40%; a shorter one might reach 70%; 4 million words will probably give a type/token ratio of about 2%, and so on. Such type/token information is rather meaningless in most cases, though it is supplied in a WordList statistics display. The conventional TTR is informative, of course, if you're dealing with a corpus comprising lots of equal-sized text segments (e.g. the LOB and Brown corpora). But in the real world, especially if your research focus is the text as opposed to the language, you will probably be dealing with texts of different lengths and the conventional TTR will not help you much.

Wordlist uses a different strategy for computing this, therefore. The standardised type/token ratio (STTR) is computed every **n** words as Wordlist goes through each text file. By default 65, n = 1,000. In other words the ratio is calculated for the first 1,000 running words, then calculated afresh for the next 1,000, and so on to the end of your text or corpus. A running average is computed, which means that you get an average type/token ratio based on consecutive 1,000-word chunks of text. (Texts with less than 1,000 words (or whatever n is set to) will get a

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standardised type/token ratio of 0.)

Setting the N boundary

Adjust the n number in Minimum & Maximum Settings 185 to any number between 100 and 20,000.

What STTR actually counts

Note: The ratio is computed a) counting every different form 165 as a word (so **say** and **says** are two types) b) using only the words which are not in a stop-list 70 c) those which are within the length you have specified, d) taking your preferences about numbers 283 and hyphens 275 into account.
The number shown is a percentage of new types for every n tokens. That way you can compare type/token ratios across texts of differing lengths. This method contrasts with that of Tuldava 262 (1995:131-50) who relies on a notion of 3 stages of accumulation. The WordSmith method of computing STTR was my own invention but parallels one of the methods devised by the mathematician David Malvern working with Brian Richards (University of Reading).

Further discussion

TTR and STTR are both pretty crude measures even if they are often assumed to imply something about "lexical density". Suppose you had a text which spent 1,000 words discussing **ELEPHANT, LION, TIGER** etc, and then 1,000 discussing **MADONNA, ELVIS**, etc., then 1,000 discussing **CLOUD, RAIN, SUNSHINE**. If you set the STTR boundary at 1,000 and happened to get say 48% or so for each section, the statistic in itself would not tell you there was a change involving Africa, Music, Weather. Suppose the boundary between Africa & Music came at word 650 instead of at word 1,000, I guess there'd be little or no difference in the statistic. But what *would* make a difference? A text which discussed clouds and written by a person who distinguished a lot between types of cloud might also use **MIST, FOG, CUMULUS, CUMULO-NIMBUS.** This would be higher in STTR than one written by a child who kept referring to **CLOUD** but used adjectives like **HIGH, LOW, HEAVY, DARK, THIN, VERY THIN** to describe the clouds... and who repeated **DARK, THIN**, etc a lot in describing them.....

(NB. Shakespeare is well known to have used a rather limited vocabulary in terms of measures like these!)

9.26 case sensitivity

Normally, you'll make a case-insensitive word list, especially as in most languages capital letters are used not only to distinguish proper nouns but also to signal beginnings of sentences, headings, etc. If, however, you wish to make a word list which distinguishes between major, Major and MAJOR, activate case sensitivity (*Adjust Settings* | *WordList* | *Case Sensitivity* in the Controller 4).

When you first see your case-sensitive list, it is likely to appear all in UPPER CASE. Press *Ctrl/L* or choose the *Layout* 54 menu option ( ) to change this.

9.27 minimum & maximum settings

These include:

minimum word length

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Default: 1 letter. When making a word-list, you can specify a minimum word length, e.g. so as to cut out all words of less than 3 letters.

maximum word length

Default: 49 letters. You can allow for words of up to 50 characters in length. If a word exceeds the limit and Abbreviate with + is checked, WordList will append a + symbol at the end of it to show that it was cut short. (If Abbreviate with + is not checked, the long word will be omitted from your word list. You might wish to use this to set both minimum and maximum to say, 4, and leave Abbreviate with + un-checked – that way you'll get a wordlist with only the 4-letter words in it.

minimum frequency

Default: 1. By default, all words will be stored, even those which occur once only. If you want only the more frequent words, set this to any number up to 32,000.

maximum frequency

Default maximum is 2,147,483,647 (2 Gigabytes). You'd have to analyse a lot of text to get a word which occurred as frequently as that!. You might set this to say 500, and the minimum to 50: that way your word-list would hold only the moderately common words.

type/token mean number (default 1,000)

Enables a smoothed calculation of type/token ratio for word lists. Choose a number between 10 and 20,000. For a more complete explanation, see WordList Type/Token Information 184.

See also: Text Characteristics 72, Stop Lists 70, Setting Defaults 65

9.28 sort order

How to do it...

Sorting can be done simply by pressing the top row of any list. Press again to toggle between ascending & descending sorts.
With a word-list on your screen, the main Frequency window doesn't sort, but you can re-sort the Alphabetical window (look at the tabs at the bottom of WordList to choose the tab) in a number of different ways.
To choose one of the special sorts specified below, press F6 or Ctrl/F6 or Shift/Ctrl/F6. Or choose the appropriate menu option.

Alphabetical Word Sort

Many languages have their own special sorting order, so prior to sorting or re-sorting, check that you have selected the right language 30 for the words being sorted. Spanish, for example, uses this order: **A,B,C,CH,D,E,F,G,H,I,J,K,L,LL,M,N,Ñ,O,P,Q,R,S,T,U,V,W,X,Y,Z.**

Reverse Word Sort

This is so that you can sort words by suffix. The order is determined by word endings, not word beginnings. You will therefore find all the *-ing* forms together.

Word Length Sort

This is so that you can sort words by their length (1-letter, 2-letter, etc up to 50-letter words) Within a set of equal-length words, there's a second, alphabetical sort.

Consistency Sort

Press the "Texts" header to re-sort the words according to their consistency 162.

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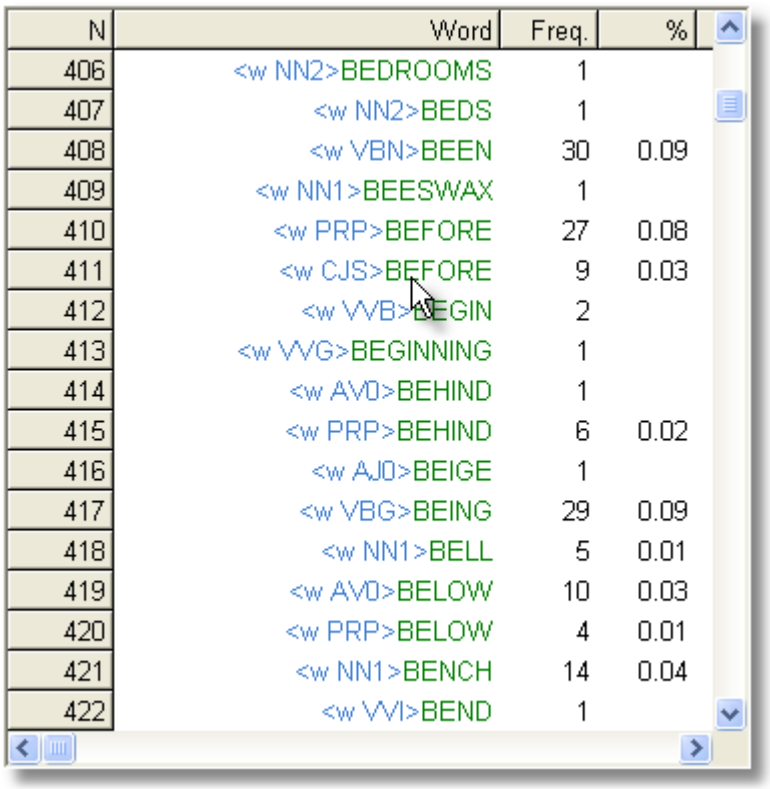
See also: Concord sort 124, KeyWords sort 151, Editing entries 47; Accented characters 264; Choosing Language 30

9.29 WordList and tags

If you have defined a tag file and made the appropriate settings 191, you can get a word-list which treats tags and words separately as in this example, where the tag is viewed as if it were a prefix.

In its *Alphabetical* view, The list can be sorted on the tag or the word.



N	Word	Freq.	%
406	<w NN2>BEDROOMS	1	
407	<w NN2>BEDS	1	
408	<w VBN>BEEN	30	0.09
409	<w NN1>BEESWAX	1	
410	<w PRP>BEFORE	27	0.08
411	<w CJS>BEFORE	9	0.03
412	<w VVB>BEGIN	2	
413	<w VVG>BEGINNING	1	
414	<w AV0>BEHIND	1	
415	<w PRP>BEHIND	6	0.02
416	<w AJ0>BEIGE	1	
417	<w VBG>BEING	29	0.09
418	<w NN1>BELL	5	0.01
419	<w AV0>BELOW	10	0.03
420	<w PRP>BELOW	4	0.01
421	<w NN1>BENCH	14	0.04
422	<w VVI>BEND	1	

To colour these as in the example, in the main Controller I chose colour 40 for the foreground for tags.

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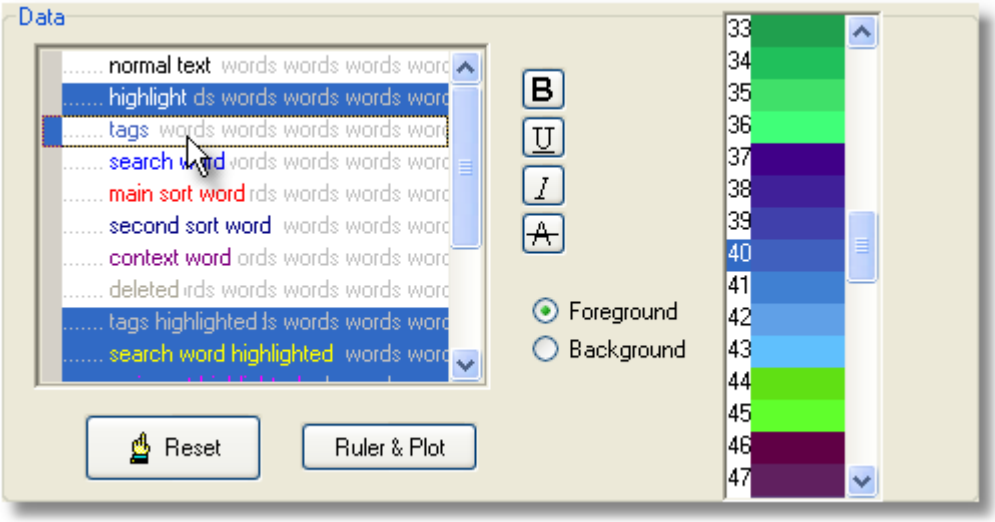
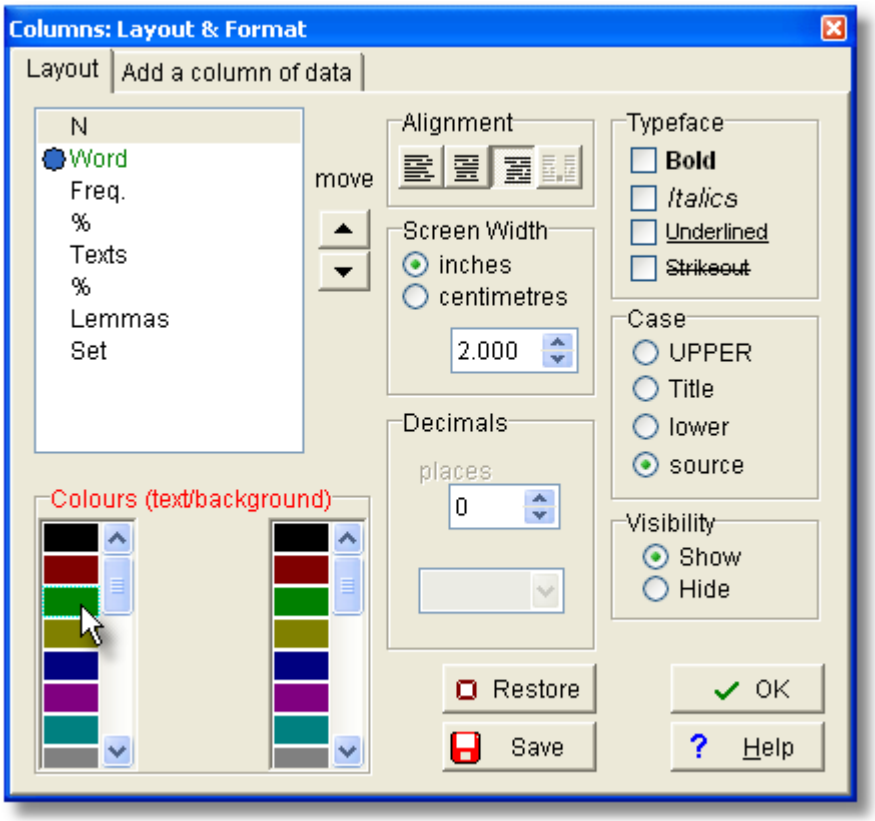


Then in WordList, I chose *View* | *Layout* as in this screenshot.



9.30 WordList display

Each WordList display shows

- the word

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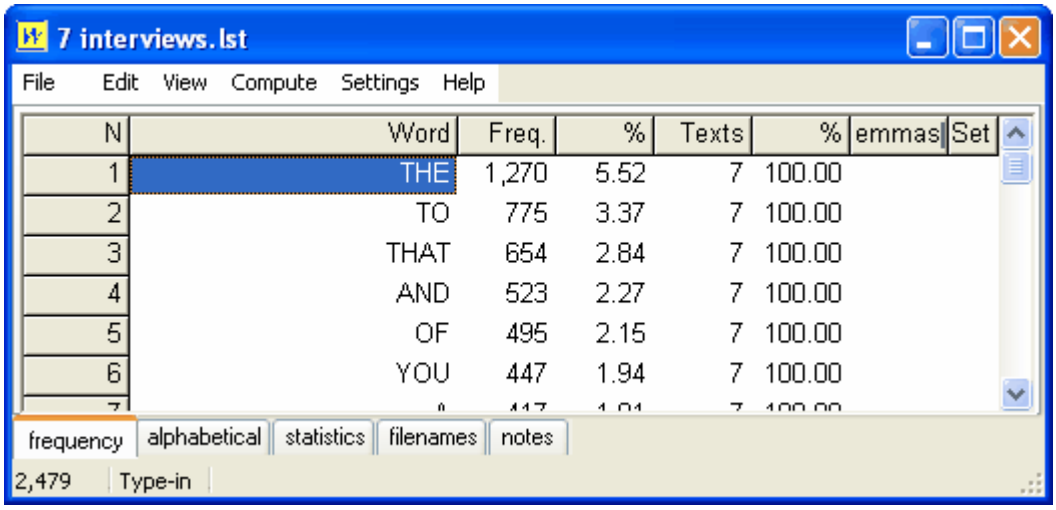
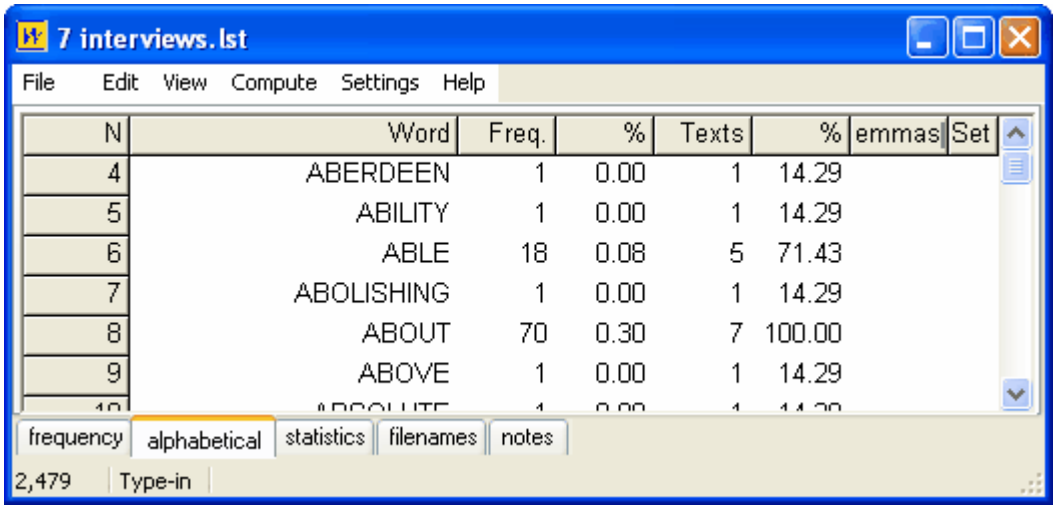
- its frequency
- its frequency as a percent of the running words in the text(s) the word list was made from
- the number of texts each word appeared in
- that number as a percentage of the whole corpus of texts

The Frequency display might look like this:



N	Word	Freq.	%	Texts	%	emmas	Set
1	THE	1,270	5.52	7	100.00		
2	TO	775	3.37	7	100.00		
3	THAT	654	2.84	7	100.00		
4	AND	523	2.27	7	100.00		
5	OF	495	2.15	7	100.00		
6	YOU	447	1.94	7	100.00		

Here you see the top 6 words in a word list based on 7 interviews. There are 2,479 words altogether but in the screenshot we can only see the first few. The Freq. column shows how often each word cropped up (**THE** appeared 1,270 times in the 7 texts), and the % column tells us that 1,270 represents 5.52% of the running words in the 7 texts. The Texts column shows that **THE** comes in 7 texts, that is 100% of the texts used for the word list.



N	Word	Freq.	%	Texts	%	emmas	Set
4	ABERDEEN	1	0.00	1	14.29		
5	ABILITY	1	0.00	1	14.29		
6	ABLE	18	0.08	5	71.43		
7	ABOLISHING	1	0.00	1	14.29		
8	ABOUT	70	0.30	7	100.00		
9	ABOVE	1	0.00	1	14.29		

The Alphabetical listing also shows us some of the words but now they're in alphabetical order. **ABLE** comes 18 times altogether, and in 5 of the 7 texts. **ABOUT**, on the other hand, comes in all 7 texts.

Now let's examine the statistics.

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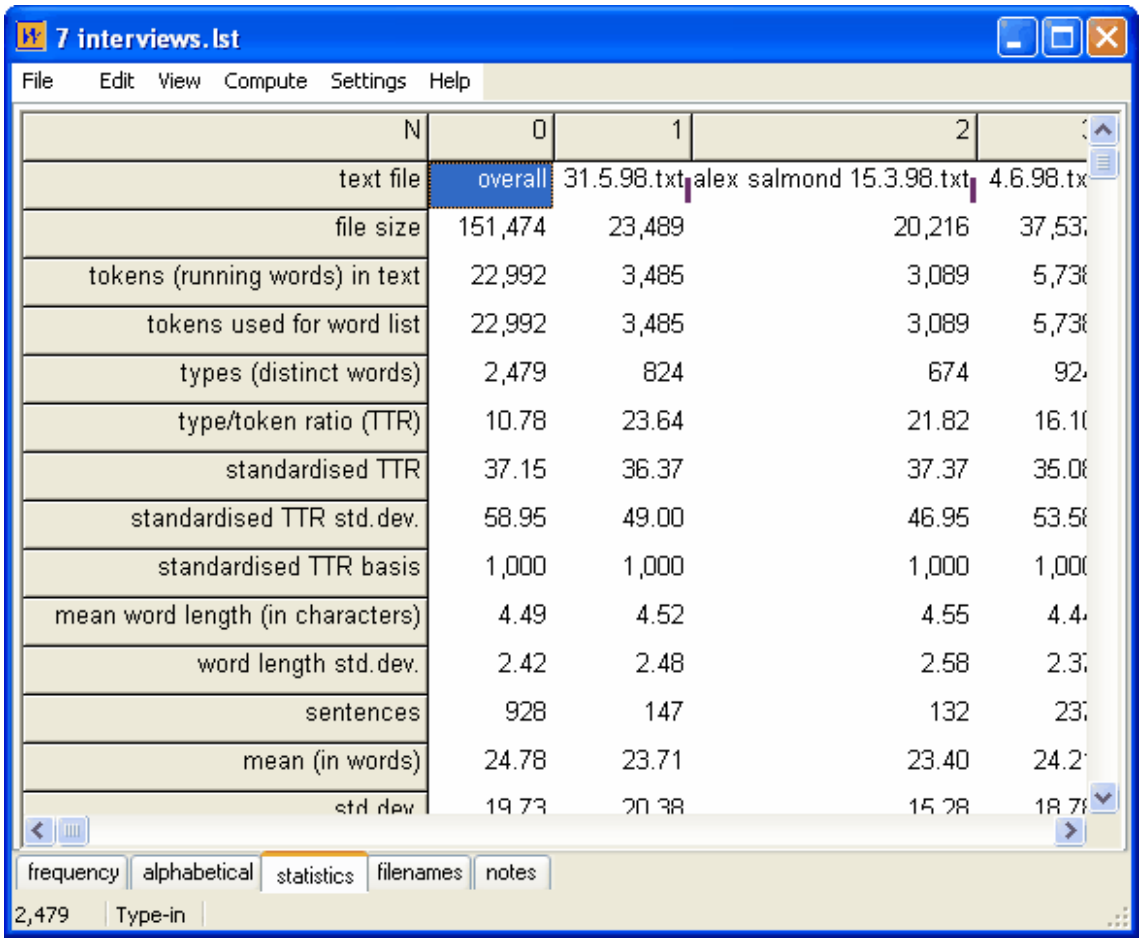

In all 7 texts, there are 2,749 word types (as pointed out above). The total running words is 22,992. Each word is about 4.49 characters in length. There are 928 sentences altogether, on average 24.78 words in length. In the text of the interview with Alex Salmond, there are only 674 differenmt word types and that interview is only just over 3,000 words in length. This is explained in more detail in the Statistics 181 page.

Finally, here is a screenshot of the same word list sorted "reverse alphabetically". In the part which we can see, all the words end in **-IC**.

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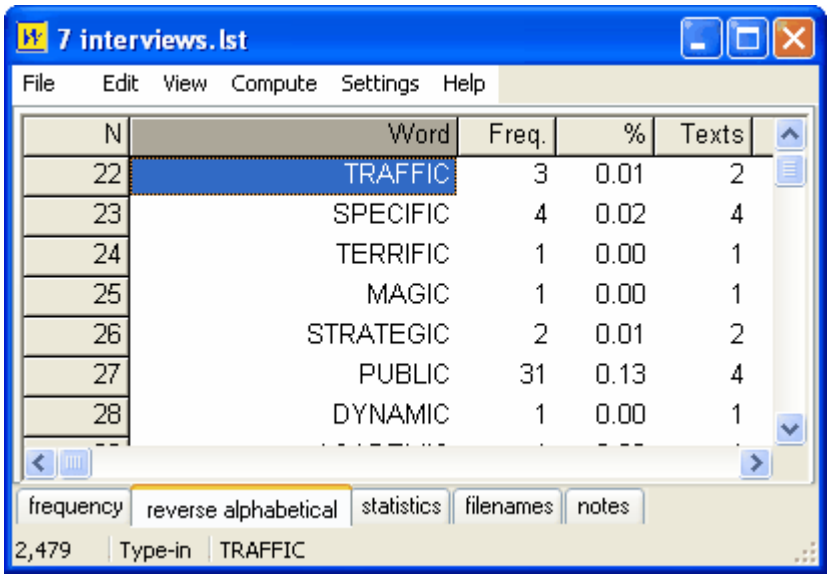

To do a reverse alphabetical sort, I had the Alphabetical window visible, then chose *Edit* | *Reverse Word sort* in the menu. To revert to an ordinary alphabetical sort, press F6.

See also : Consistency 164, Lemmatisation 165

9.31 WordSmith controller: WordList settings

These are found in the main Controller 4 under *Adjust Settings* | *WordList*.
This is because some of the choices -- e.g. Minimum & Maximum Settings 185 -- may affect other Tools.
There are 2 sets : What you Get and What you See.

WHAT YOU GET

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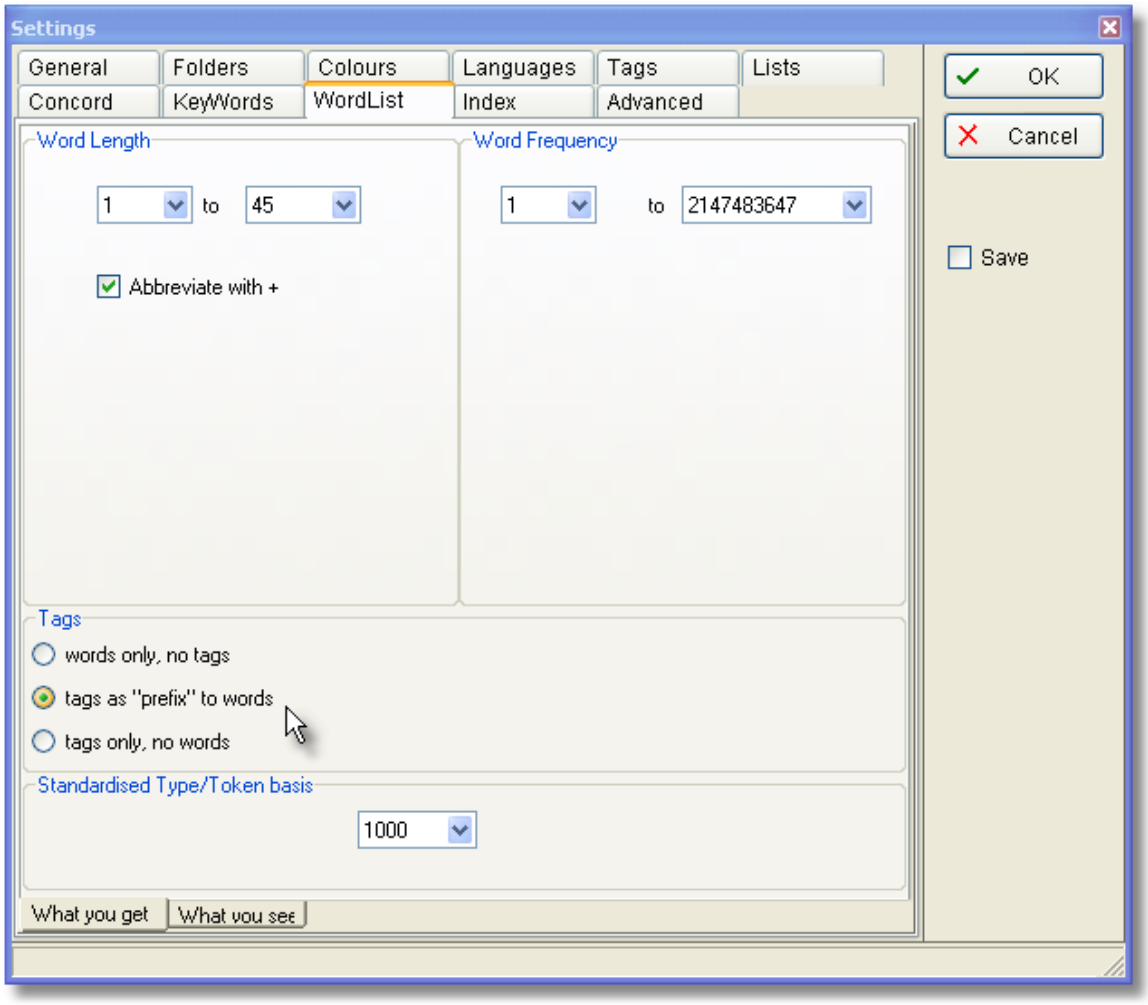

Word Length & Frequencies

See Minimum & Maximum Settings 185.

Standardised Type/Token

See WordList Type/Token Information 184.

Tags

By default you get "words only, no tags". If you want to include tags in a word list, you need to set up a Tag File 82 first. Then choose one of the options here. Tags are not counted in any statistics based on a running word count or number of tokens or types. What you will see for each is its frequency, that frequency as a percentage of the running words excluding tags, and the number of texts it is in.

In the example here we see that **BECAUSE** is classified by the BNC either as a **<w CJS>** or a **<w PRP>**. (That's how the BNC classifies **BECAUSE OF**...)

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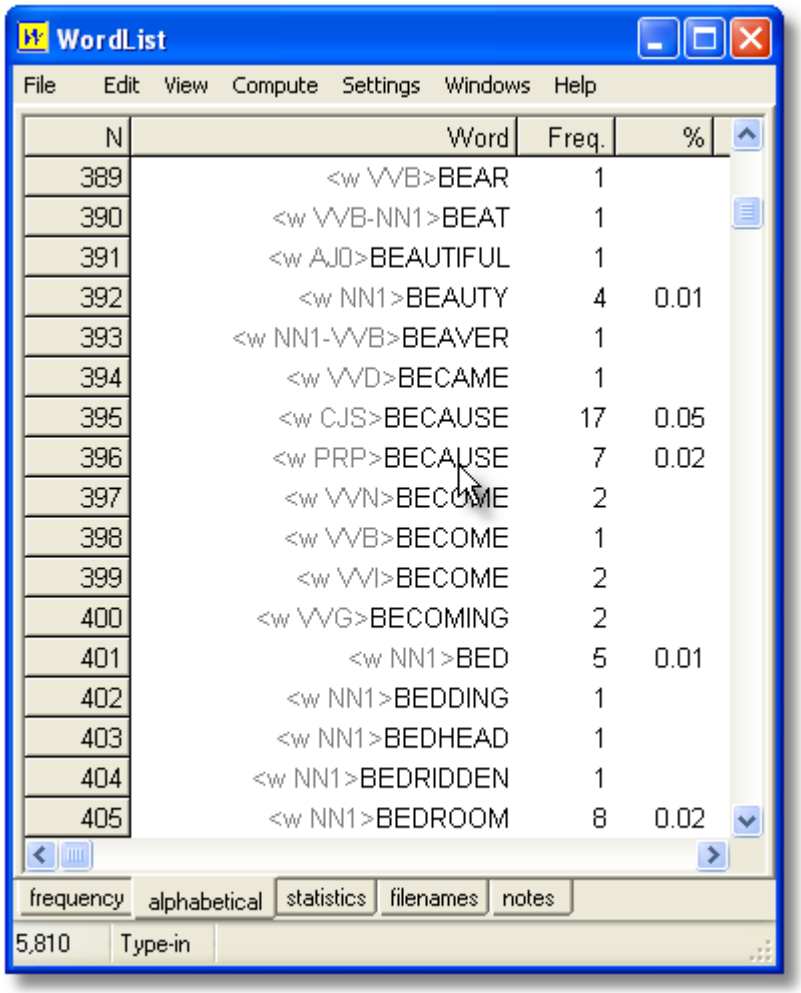

For colours and tags see WordList and Tags 187.

WHAT YOU SEE

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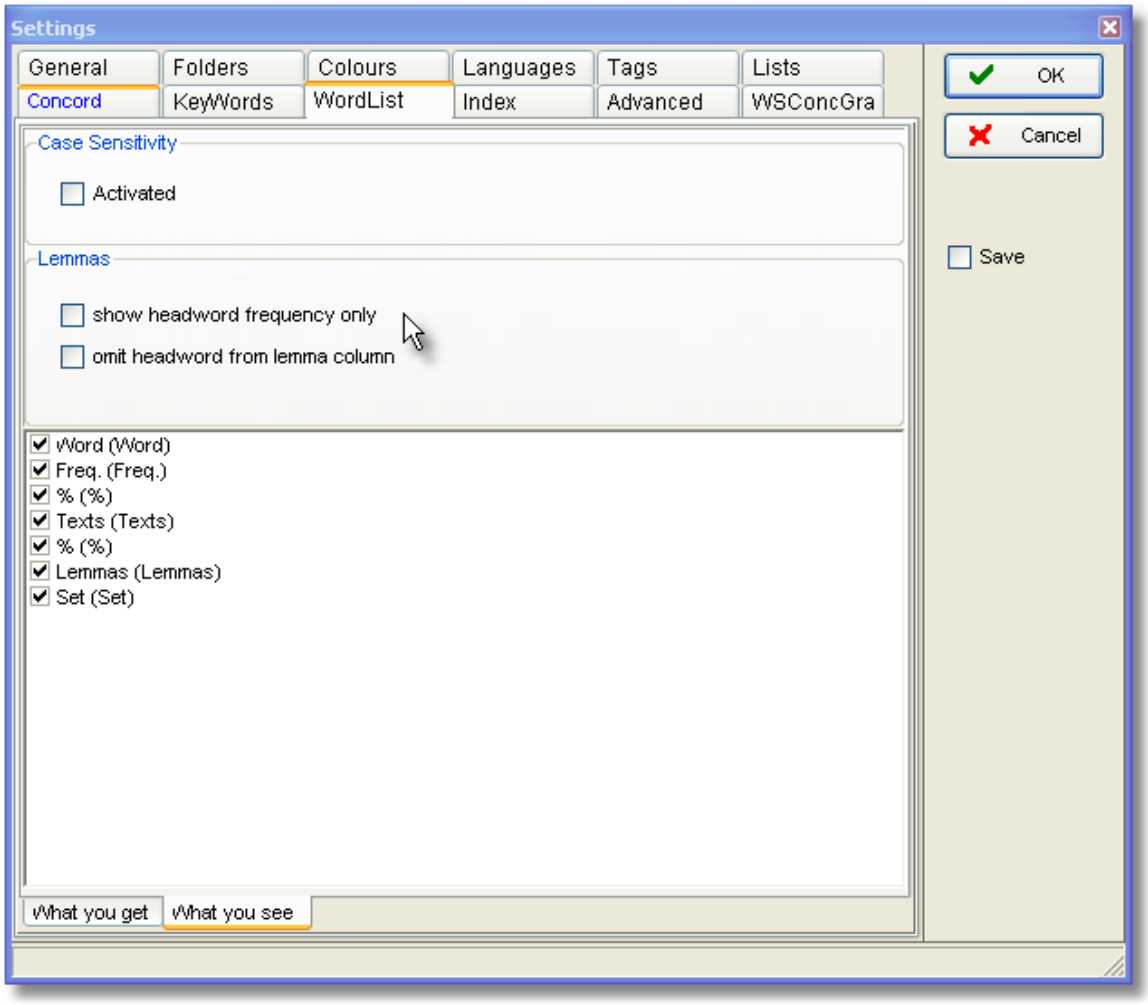

Case Sensitivity

Normally, you'll make a case-insensitive word list. If you wish to make a word list which distinguishes between **the**, **The** and **THE**, activate case sensitivity 185.

Lemma Visibility

By default in a word-list you'll see the frequency of the headword plus the associated forms; if you check the *show headword frequency only* box, the frequency column will ignore the associated wordform frequencies. Similarly, if you check *omit headword from lemma column* you will see only the associated forms there.

See also: Using Index Lists 166, Viewing Index Lists 167, WordList Help Contents 156, WordList and tags 187, Computing word list clusters 170.

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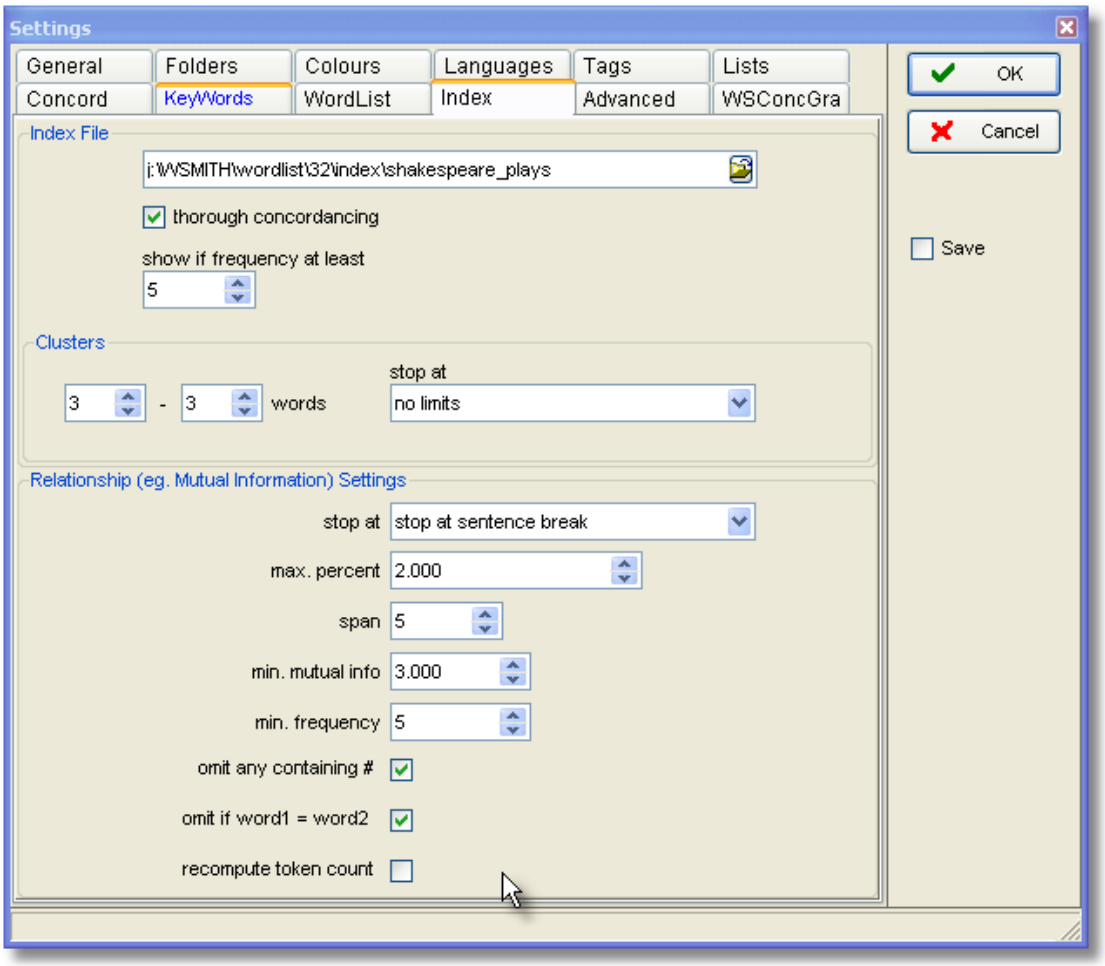
9.32 WordSmith controller: Index settings



Index File

The filename is for a default index which you wish to consider the usual one to open.

thorough concordancing: when you compute a concordance from an index, you will either get (*thorough* checked) or not get (if not checked) full sentence, paragraph and other statistics 110 as in a normal concordance search. (Computing these statistics takes a little longer.)

show if frequency at least: determines which items you will see when you load up the index file. (What you see looks like a word list but it is reading the underlying index.)

Clusters

the minimum and maximum sizes are 2 and 8. Set these before you compute a multi-word word list 170 based on the index. A good maximum is probably 5 or 6.

stop at: you can choose where you want cluster breaks to be assumed. With the setting above (no limits), "**`I wrote the letter. Then I posted it`**" would consider **`letter then I posted`** as a possible multi-word string even though there's a sentence break between them.

Relationship settings

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stop at: you can choose where you want collocational breaks to be assumed. With the setting above for relationships (stop at sentence break), "**I wrote the letter. Then I posted it**" would not consider **posted** as a possible collocate of **letter** because there's a sentence break between them.

max. percent: ignores any tokens which are more frequent than the percentage indicated. (The point of this is to avoid computing mutual information for words like **the** and **of**, which are likely to have a frequency greater than say 1.0%.)

span: the number of intervening words between collocate and node. With a span of 5, the node **wrote** would consider **the, letter, then, I** and **posted** as possible collocates if *stop at* were set at *no limits.*

min. mutual info: the minimum number which the MI or other selected statistic must come up with to be reported. A useful limit for MI is 3.0. Below this, the linkage between node and collocate is likely to be rather tenuous.

min. frequency: the minimum frequency for any item to be considered for the calculation (default = 5). (If an item occurs only once or twice, the relationship is unlikely to be informative.)

omit any containing #: disregard numbers

omit if word1 = word2: disregard cases like **happy .. happy** where a word collocates with itself

recompute token count 175

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Utility Programs

10 Utility Programs

10.1 Convert Data from Previous Versions

10.1.1 Convert Data from Previous Versions

As WordSmith Tools develops, it has become necessary to store more data along with any given word-list, concordance etc. For example, data about which language 30(s) were selected for a concordance, notes 22 now stored with every type of results file, etc. Therefore it has been necessary to supply a tool to convert data from the formats used in WS 1.0 to 3.0 to the new format for the current version.

This is the Data Converting tool.

If you try to open a file made with a previous version you should be offered a chance to convert it first.

10.2 WebGetter

10.2.1 overview

The point of it

The idea is to build up your own corpus of texts, by downloading web pages with the help of a search engine.

What you do

Just type a word or phrase and press Go or <Enter>.

How it works

WebGetter visits the Search Engine specified in the second box and downloads the first 100 sources or so. Basically it uses the Search Engine just as you do yourself, getting a list of useful references. Then it sends out a robot to visit each web address and download the web page in each case (not from the Search Engine's cache but from the original web-site). Quite a few robots may be out there searching for you at once -- the advantage of this is that one slow download doesn't hold all the others up.

After downloading a web page, that WebGetter robot checks it meets your requirements (in Settings 199). If the page is big enough, a file with a name very similar to the web address will be saved to your hard disk.

When it runs out of references, WebGetter re-visits the Search Engine and gets some more.

See also: Settings 199, Display 200, Limitations 201

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10.2.2 settings

These are

- where the texts are to be stored. The folder you specify will act as a *root*. That is, if you specify **`c:\temp`** and search for "besteirol", results will be stored in **`c:\temp\besteirol`**. If you do another search on say " WordSmith Tools", results for that will go into **`c:\temp\WordSmithTools`**.
- timeout: the number of seconds after which WebGetter robot stops trying a given webpage if there's no response. Suggested value: 20 seconds.
- max simultaneous: WebGetter works by sending robots out simulaneously, each one requesting a different web page. Suggested value: 20. That is, up to 20 are being downloaded at once.
- language: you specify the language you require.
- minimum file length (suggested 20Kbytes): the minimum size for each text file downloaded from the web. Small ones may just contain links to a couple of pictures and nothing much else.
- minimum words (suggested: 300): after each download, WebGetter goes through the downloaded text file counting the number of words and won't save unless there are enough.
- required words: you may optionally type in some words which you require to be present in each download; you can insist they all be present or any 1 of these.

Search Engines

Download a choice of search engines by pressing Engines. This gets the latest information about each search engine from www.lexically.net/downloads/searchengines.htm.

Advanced Options

If you work in an environment with a "Proxy Server", WebGetter will recognise this automatically and use the proxy unless you uncheck the relevant box. If in doubt ask your network administrator.

The grid of settings

This contains:

name	The Name to appear above, in the list of Search Engines
ignore	Websites not to visit when downloading (as opposed to requesting a list). That is, when WebGetter gets a page from Google, it only wants Google's list, not more Google web-pages.
URL	The URL where the Search Engine is found.
Searchstring	The search word syntax
Max	How many hits to try for on each contact
Next	
Language	Required language
Other	

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The search word is specified more or less just as you do when you use the same Search Engine yourself. Few advanced settings for each Search Engine are used; you can try your own preferences by typing in the grid, in the Searchstring column. Learn each Search Engine's current settings by simply trying it and then adapt the Searchstring accordingly. Some Search Engines want to set cookies on your PC and this might cause a failure to download.

You can see the address line in the Advanced tab; WebGetter attempts to tell the Search Engine the search-word, the maximum number of hits to show per contact, what language to use, and how to get more.

See also: Display 200, Limitations 201

10.2.3 display

As webgetter works, it shows the URLs visited. If greyed out, they were too small to be of use or haven't been contacted yet. If dark blue, they were saved to disk. Above, you will see the bytes visited, and every time a file which meets your requirments is stored, you'll see the number of files and number of words go up. At the bottom, the current time and elapsed time.

There is a tab giving access to a list of the successfully downloaded files.

Here is a partial list of what I got with a broadband connection, in 1 minute & 1 second, with the search term "history of the English language" (*with* quotes).

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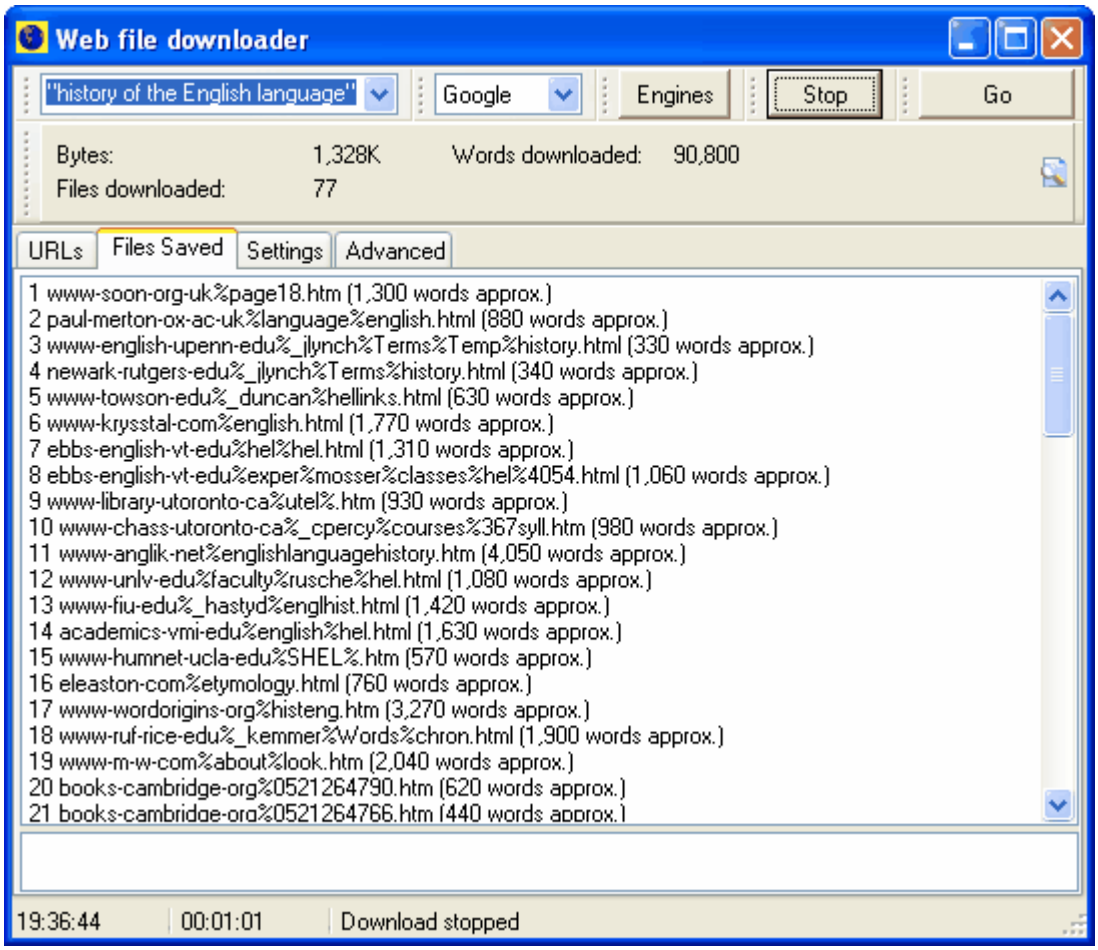

As you can see, about 1.3MB of web-pages were examined, and 90,000 words (1.1MB) were found worth saving, with the default settings (they each had to be at least 10K in size and have 300 words). In that time I got a couple of time-outs, presumably because 20 seconds isn't long enough for some websites or servers which are slow and ponderous.

See also: Settings 199, Limitations 201

10.2.4 limitations

Everything depends on the search engine and the search terms you use. The Internet is a huge noticeboard; lots of stuff on it is merely ads and catalogue prices etc. The search terms are collected by the search engines by examining terms inserted by the web page author. There is no guarantee that the web pages are really "about" the term you specify, though they should be roughly related in some way.

Use the Settings 199 to be demanding about what you download.

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See also: Display 200

10.3 Corpus Corruption Detector

10.3.1 Aim

The purpose is to check whether one or more of your text files in your corpus doesn't belong. This could be because

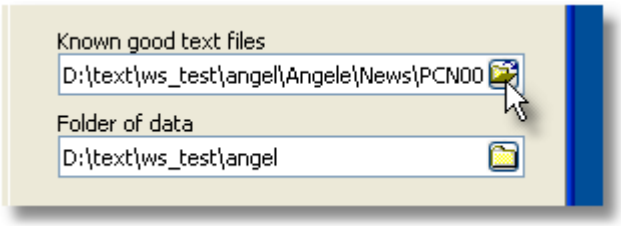
- it has got corrupted so what used to be good text is now just random characters or has got cut much shorter because of disk problems
- it isn't even in the same language as the rest of the corpus

The tool works in any language. It does it by using a known sample of good text (in whatever language) and comparing that good text with all your corpus.

See also : How to do it 202

10.3.2 How it works

1. Choose a set of "known good text files" which you're sure of. The program uses these to evaluate the others.



When you click the button for known good text files, you can choose a number. You might choose 20 good ones so as to get a lot of information about what your corpus is like.

2. Choose your corpus head folder and check the "include sub-folders" box if your corpus spreads over that folder and sub-folders.

3. The program will anyway look out for oddities such as a text file which has holes in it, eg. where the system thinks it's 1000 characters long but there are only 700.

4. If you check the "digraph check" box it will additionally check that the pairs of letters (digraphs) are of roughly the right frequency in each text file. For example there should be a lot of TH combinations if your text is in English, and no QF combinations. If you are working with a corpus in Portuguese and your text files are in Portuguese too, of course the digraphs will be different, and TH won't be frequent. The program ignores punctuation.

5. If you are doing a digraph check you can vary certain parameters such as how much variation there may be between the frequencies of the digraphs (a sensible setting for "frequency variation per 1000" could be 30 (in other words 3%)), and "percent fail allowed" (which might be set at say

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25 -- this means that up to 25% of the digraph pairs may be out of balance before an alert is sounded).

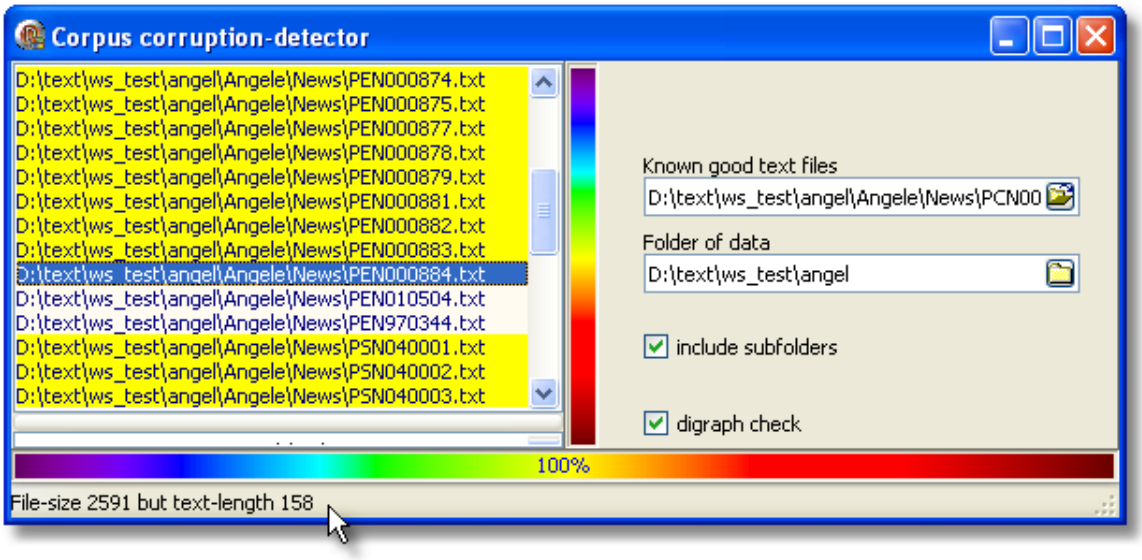
6. Press Start.

You will see the progress bar moving forward.

If you see a file-name in the top-left box, a click on it will indicate why it was found questionable. Double-clicking it will open up the text in the window below so you can examine it carefully.

Filenames of possibly corrupted texts are yellow if the basic check fails, and cream-coloured if the reason is because of a diagraph mis-match.

In the screenshot, PEN000884.txt is problematic because the file-size on disk is 2591 (there should be 2591 characters) but there are only 158, as shown in the statusbar at the bottom.



In the case of PEOP020151.txt, the text appears below (after double-clicking the list),

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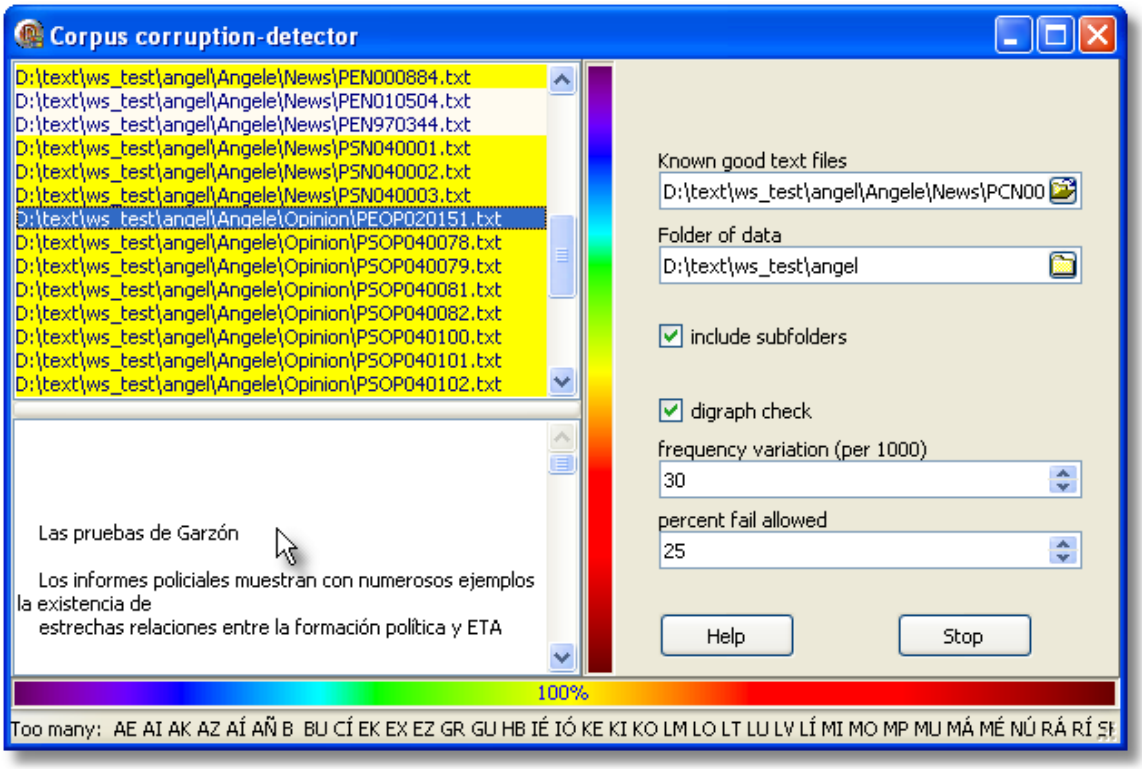

and the status bar says the tool has found an imbalance in the digraphs. The text itself has a lot of blank space at the top but otherwise looks OK (it is supposed to be in Spanish) but the detector has flagged it up as possibly defective.

10.4 Languages Chooser

10.4.1 Overview

A tool for selecting Languages which you want to process.
You will probably only need to do this once, when you first use WordSmith Tools.

How to get here

The Language Chooser is accessed from the main WordSmith Controller menu: *Settings* | *Adjust Settings* | *Text and Languages* | *Other Languages*.

What you will see may look like this:

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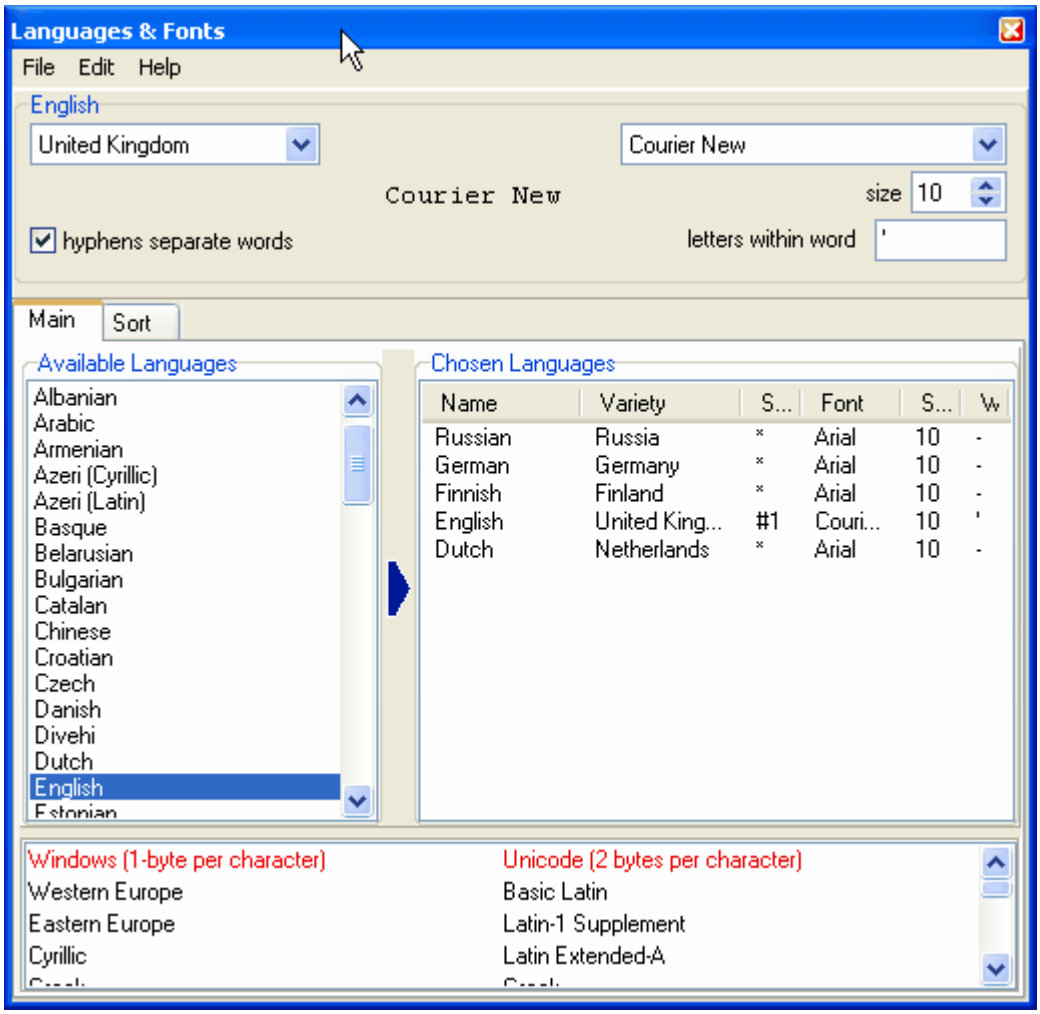

5 languages have been chosen already.
At the bottom you will see what the current font can handle, in terms of Windows ANSI or Unicode text. The Courier New font on the PC this was done on can handle characters in Windows for Western and Eastern Europe, Cyrillic etc., as well as several ranges within the Unicode standard.

See also : Language 205, Font 207, Sort Order 207, Other Languages 208, saving your choices 209

10.4.2 Language

How to get here

The Language Chooser is accessed from the main WordSmith Controller menu: *Settings* | *Adjust Settings* | *Text and Languages* | *Other Languages*.

What it does

The list of languages on the left shows all those which are supported by the PC you're using. If any of them are greyed, that's because although they are "supported" by your version of Windows, they haven't been installed in your copy of Windows. (To install more multilingual

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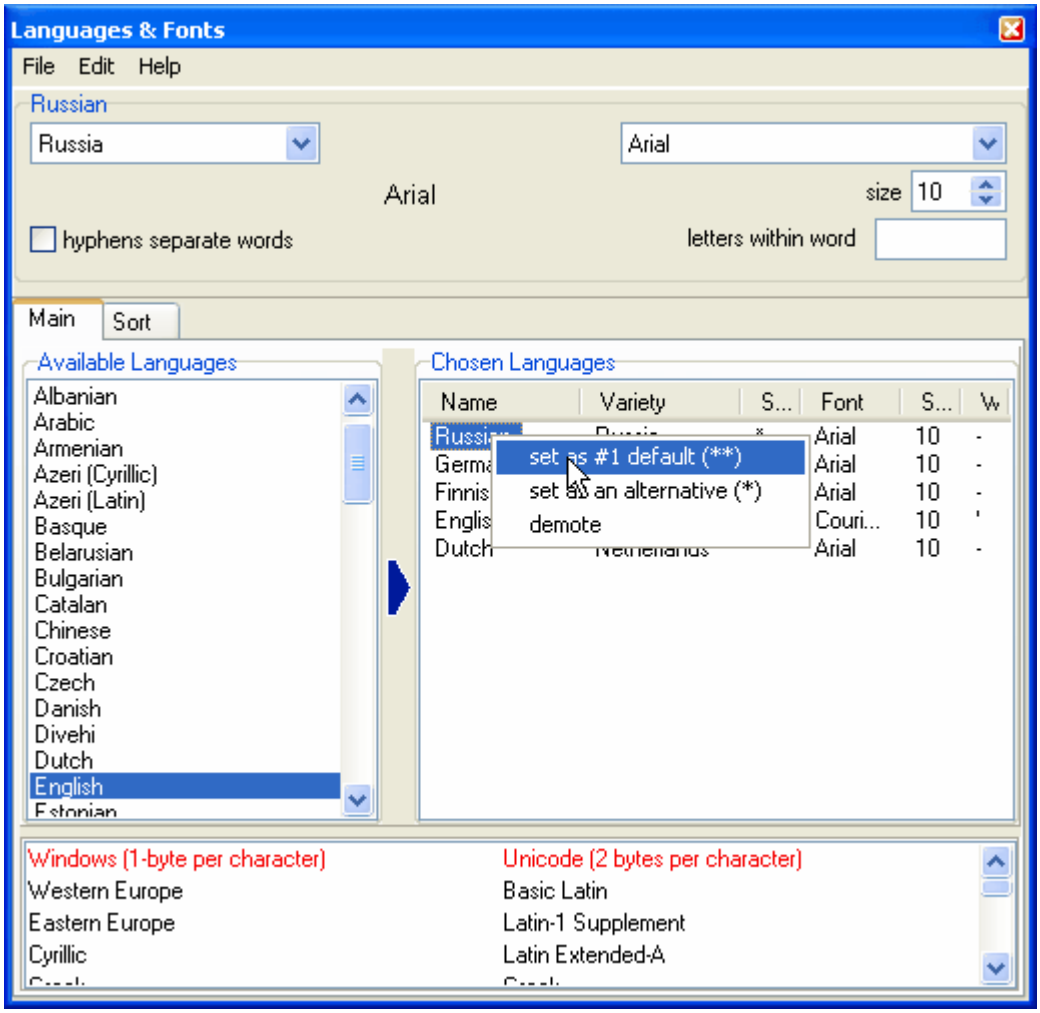
support, you will need your original Windows cdrom or may be able to find help on the Internet.)



On the right, there are the currently chosen languages for use with WordSmith. The default language should be marked #1 and others which you might wish to use with *. For each Chosen Language, you can specify any symbols which can be included within a word, e.g. the apostrophe in English, where it makes more sense to think of "don't" as one word than as "don" and "t". You can also specify whether a hyphen separates words or not (e.g. whether "self-conscious" is to be considered as 2 words or 1).

To change the status of a chosen language, right-click. This user is about to make Russian the #1 default. To delete any unwanted language, right-click and choose "demote". To add a language, drag it from the left window to the right, then set the country and font you prefer for that particular language.

Each time you change language, the list of fonts 207 available changes, and the sorted words 207 will change their appearance. The window at the bottom shows which characters can be supported in Unicode or 1-byte format by the highlighted language.

Some languages do not mark word-separators 269.

See also : Other Languages 208, saving your choices 209

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10.4.3 Font

The Fonts window shows those available for each language, depending on fonts you have installed. You will need a font which can show the characters you need: there are plenty of specialised fonts to be found on the Internet. Unicode fonts can show a huge number of different characters, but require your text to be saved in Unicode format. If you change font, the list of characters available changes.

Click here for more on Unicode.

See also : Language 205, Sort Order 207, Other Languages 208, saving your choices 209

10.4.4 Sort Order

Sorting is done in accordance with the language chosen. (Spanish, Danish, etc. sort differently from English.)

The display

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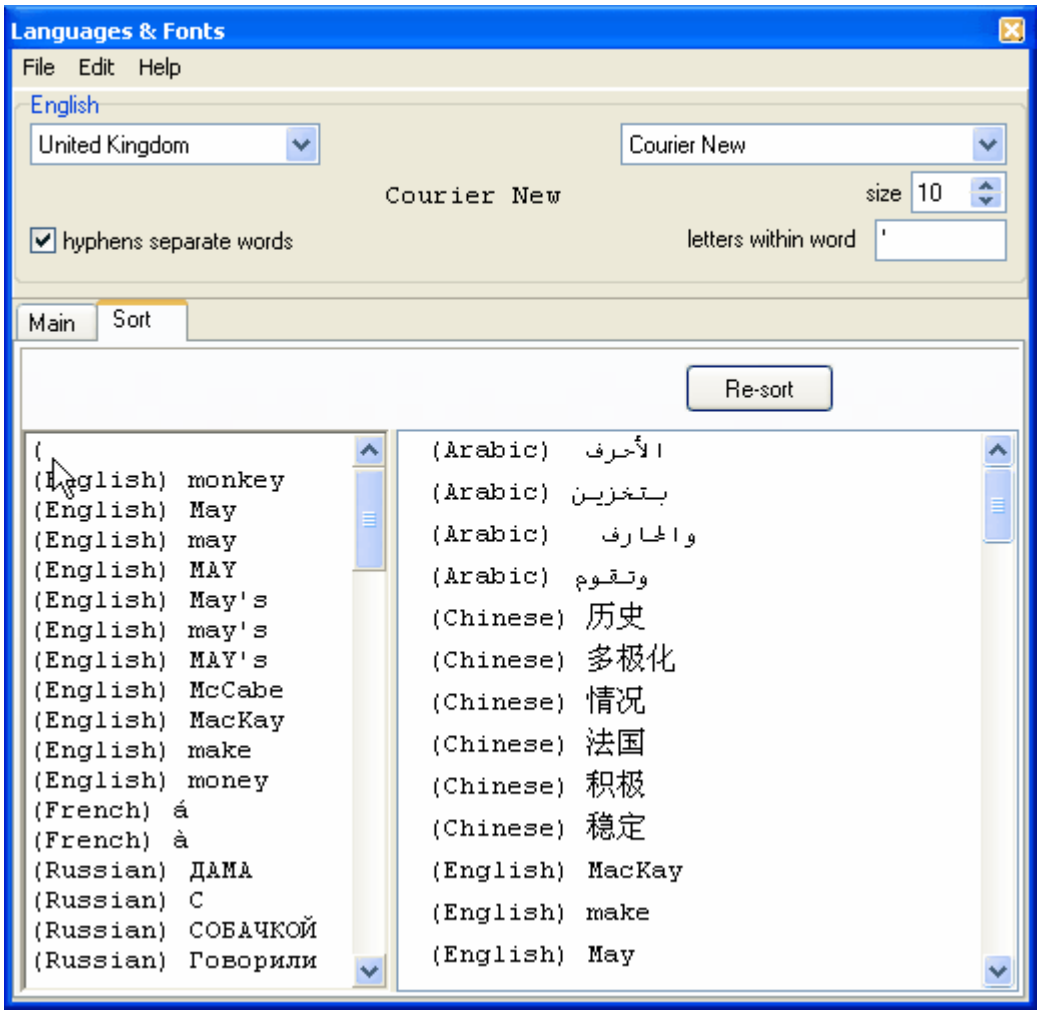

- You will see 2 windows below "Resort" -- the one at the left contains some words in various languages; you can add your own. The cursor in the screenshot shows where a user is about to type, having already typed "(". If your keyboard won't let you type them in, paste from your own collection of texts.
- The one at the right shows how these words get sorted according to the language you have selected.

See also : Language 205, Font 207, Other Languages 208, saving your choices 209

10.4.5 Other Languages

To work on a language not in the list, press *Edit* and base your new language name on one of the existing languages. Choose a font which can show the characters & symbols you want to include. Sort order is handled as for the language you base your new language on.

See also : Language 205, Font 207, Sort Order 207, saving your choices 209

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10.4.6 saving your choices

Save your results before quitting, so that next time WordSmith Tools will know your preferences regarding fonts and your #1 default language and your subsidiary default languages and you won't need to run this again. Results will be in **`Program Files\wsmith5\language_choices.ini`**.

See also : Language 205, Font 207, Sort Order 207, Other Languages 208

10.5 Minimal Pairs

10.5.1 aim

A program for finding possible typos and pairs of words which are minimally different from each other (minimal pairs). For example, you may have a word list which contains ALEADY 5 and ALREADY 461, that is, your texts contain 5 instances where there is a possible misprint and 461 which are correct. This program helps to find possible variants and typos and anagrams.

See also : requirements 209, choosing your files 210, output 210, rules and settings 210, running the program 211.

10.5.2 requirements

A word-list in text format. Each line should contain a word and its frequency separated by tabs, e. g.

```
THE             75,432
WAS             9,895
```

or

```
1               THE             75,432
2               WAS             9,895
```

You can make such a list using WordList 5. For example, select (highlight) the columns containing the word and its frequency, press the ".txt" button, then

- Clear the "Number each line" box
- Rows to save = "all" (but if it shows 0-xxx change 0 to 1)
- Columns to save = "any highlighted"

See also : aim 209, choosing your files 210, output 210, rules and settings 210, running the program 211.

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10.5.3 choosing your files

- Choose your input word list (which must be in plain text format) by clicking the button at the right of the edit space and finding the word list .txt file.
- If it has numbered lines, check the ".txt is pre-numbered" box.
- If it has a header (WS3 will by default produce 3 lines of header information) make sure you have set the "Header lines to skip" box to the right number.

- You must specify where to save your results. The results will show all the typos and minimal pairs which the program finds.
- Choose also,
  - whether to number the list of results
  - whether to show the frequencies of possible typos
  - whether to show the rule which generated the result.

See also : aim 209, requirements 209, output 210, rules and settings 210, running the program 211.

10.5.4 output

An example of output is

```
418    ALTHOUGHT      (7)     ALTHOUGH(37975)
```

Here the lines are numbered, and the bracketed numbers mean that ALTHOUGHT occurred 7 times and ALTHOUGH 37,975 times.

An example using Dutch medical text, lower case:

```
136    aplasie        (1)     aplasia(1)[L]
137    apyogene       (1)     apyogeen(1)[S]
138    arachnoideales         (1)     arachnoidales(1)[I]
```

Here line 136 generated a 1-Letter difference, 137 a Swap and 138 an Insertion.

An example using Guardian newspaper, looking for anagrams:

```
35     AUDIE  (7)     ADIEU(43)[A]
36     ABASS  (6)     ASSAB(16)[A]
37     AGUIAR (6)     AURIGA(11)[A]
38     ALRED'S        (6)     ADLER'S(18)[A]
39     ANDOR  (6)     ADORN(128)[A]
```

See also : aim 209, requirements 209, choosing your files 210, rules and settings 210, running the program 211.

10.5.5 rules and settings

Rules

Insertions (abxcd v. abcd)

This rule looks for 1 extra letter which may be inserted, e.g. HOWWEVER

Swapped letters (abcd v. acbd)

This rule looks for letters which have got swapped, e.g. HOVEWER

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1 letter difference (abcd v. abxd)

This rule looks for a 1 letter difference, e.g. HOWEXER

Anagrams too (abcd v. adbc)

This rule looks for the same letters in a different order, e.g. HWVROEE

Settings:

end letters to ignore if at last letter:

This rule allows you to specify any letters to ignore if at the end of the word, e.g. if you specify "s", the possibility of a typo when comparing ELEPHANT and ELEPHANTS will not be reported.

minimum start-of-word match

This setting (default =1) allows you to assume that when looking for minimal pairs there is a part of each at the beginning which matches perfectly. For example, when considering ALEADY, the program probably doesn't need to look beyond words beginning with A for minimal pairs. If the setting is 1, it will not find BLEADY as a minimal pair. To check all words, take the setting down to 0. The program will be 26 times slower as a result!

minimum word length

This setting specifies the minimum word length for the program to consider the possibility there is a typo. The default is 5, which means 4-letter words will be simply ignored. This is to speed up processing, and because most typos probably occur in longer words.

all words starting with …

If you choose this option, the program will ignore the next setting (max. word frequency). Here you can type in a sequence such as F,G,H and if so, the program will take all words beginning F or G or H (whatever their frequency) and look for minimal pairs based on the rules and settings above.

max. word frequency

(ignored if "all words starting with" is checked) How frequent can a typo be? This will depend on how much text your word-list is based on. The default is 10, which means that any word which appears 11 times is assumed to be OK, not a typo.

Factory Defaults (restores default values)

Save Current Settings (saves your choices of file and rules)

Get Saved Settings (restores your last-saved choices)

See also : aim 209, requirements 209, choosing your files 210, output 210, running the program 211.

10.5.6 running the program

- Press "Compute".
  You should then see your source text, with a few lines visible. Some of the rows and columns may be greyed and others white: move the column and row numbers till the real data are white and any headings or line-numbers are greyed out.

If you want to stop in the middle, press "Stop".

The status bar at the bottom of the screen shows how many words have been found in the word-list, the time elapsed, and time estimated to completion of the whole task.

You can press "Results" to see your results file, when you have finished.

Finally, "Quit".

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See also : aim 209, requirements 209, choosing your files 210, output 210, rules and settings 210

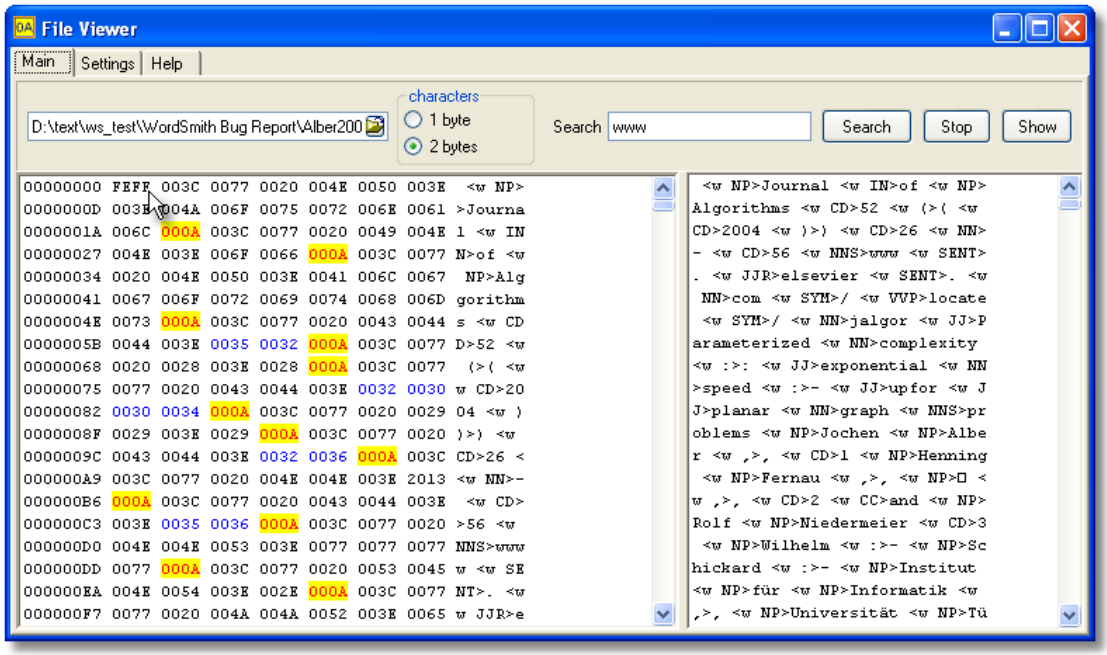
10.6 File Viewer

10.6.1 Using File Viewer

Aim

To help you examine files of various kinds to see what is in them. This might be

- in order to see whether they're really in plain text format
- to see whether there's something wrong with them, such as unusual characters which oughtn't to be there
- to see whether they were formatted for Windows, Mac, or for Unix
- to check out any hidden stuff in there. (A Word **.doc** for example will have lots of hidden stuff you don't see on the screen but is inside the file anyway, such as the name of the author, type of printer being used, etc.)
- to find strings of words in a database, a spreadsheet or even a program file.



Here you can see the gory details of the text. Some characters are highlighted in different colours so you can see exactly how the text is formatted. (In the above case we can find out it wasn't originally produced on a Windows PC.)

Loading a "text"

Choose your file – if necessary click on the button at the right of the text-input box.

Press *Show*.

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Format

The two options available are as 1 bytes or 2 to represent each character-symbol in the text in question. You may need to alter this setting to see your text in a readable format.

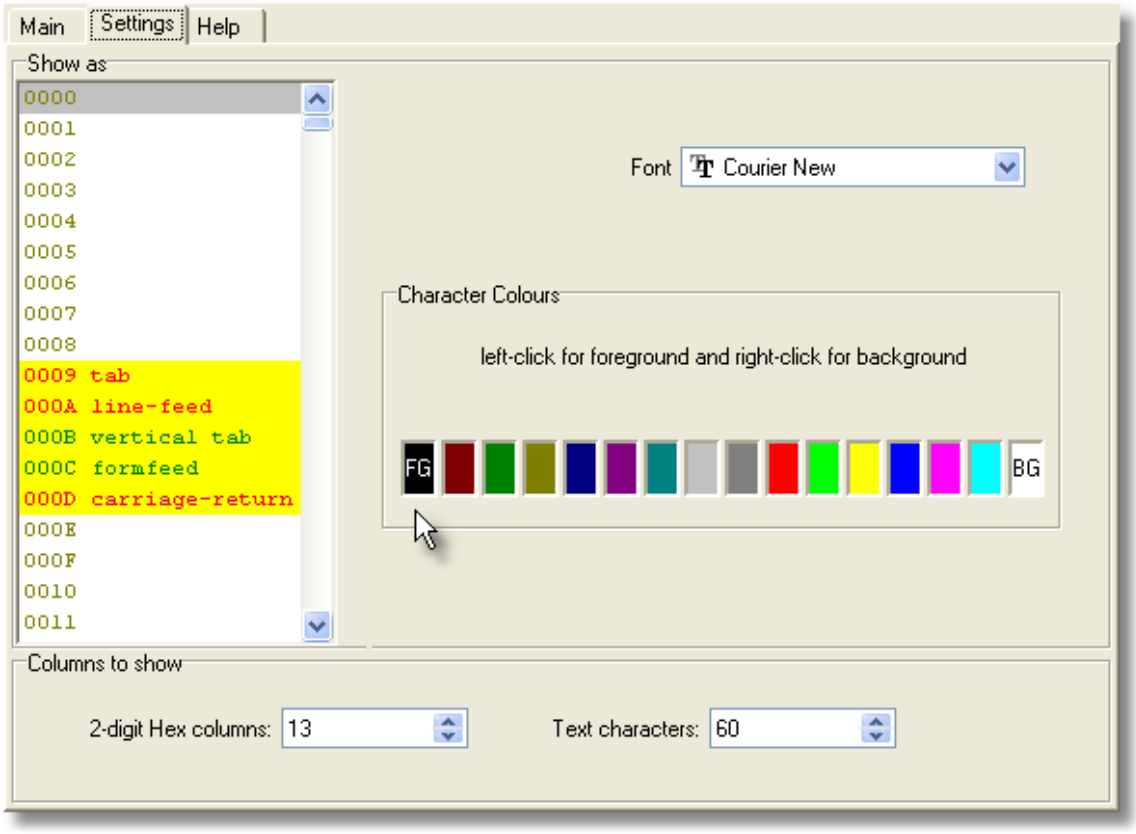
The two windows

The left window shows how the "text" is built up. You can see each character as a number and, further to the right, as a character.
The right window shows the text, line by line so you can read it. It isn't an editor and it doesn't word-wrap.

Searching

Just type in the search-word and press *Search*. The search is case sensitive and is not a "whole word" search.

Settings



Font

Choose the font in the font window. You may need to change font if you want to see Chinese etc. represented correctly.

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Colours

The colour grid lets you see the number section ("hex") in special colours, so you can find the potential problems you're interested in.

- First select the character you want coloured.
- Click the left mouse button to change the foreground colour, or
- the right button to change the background colour.

The character names are Unicode names.

Columns

o You can set the "hex" columns between 2 and 16.

o The text can be shown in anything between 10 and 100 columns.

10.7 File Utilities

10.7.1 index

This sub-program supplies a few file utilities for general use:

Compare Two Files 218
File Chunker 218
Find Duplicates 219
Rename 220
Find Holes: for "holes 302" in text files
Splitter 214
Joiner 216

10.7.2 Splitter

10.7.2.1 Splitter: index

Explanations

What is the Splitter sub-program and what's it for? 215
Filenames 215
Wildcards 216

See also : WordSmith Main Index 2

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10.7.2.2 aim of Splitter

This is a sub-program for splitting large files into lots of small ones. **Splitter** needs to know:

End of Text Separator

The symbol which will act as an end-of-text separator: eg. **[FF]** or **<end of story>** or **</Text>** or **!** # or **[FF*]** or **[FF?????]**

Restrictions:

1 The end-of-text marker must occur at the beginning of a line in the original large file.
2 It is case sensitive: **</Text>** will not find **</text>**.
3 The first character in the end-of-text separator may not be a wildcard 216 such as **#,*** or **?** .
4 ***** and # may occur only once each in the end-of-text separator.

Splitter will create a new file every time it encounters the end-of-text marker you've specified.

Destination Folder

Where you want the small files to be copied to. (You'll need write permission to access it if on a network.)

Required sizes

The minimum and maximum number of lines that your small files can have (default = 2 and 30,000). Only files within these limits will be saved. This feature is useful for extracting files from very large CD-ROM files. The default of 2 is to avoid getting little text files e.g. from newspaper *News in Brief* stories, but if you do want small texts, then set this to 1.
A "line" means from one <Enter> to the next.

Bracket first line

Whether or not you want the first line of each new text file to be bracketed inside **< >** marks. This is because often the first line after your end-of-text symbol will contain some kind of header. If you don't want it to insert < and > around the line, leave the checkbox un-checked.

Title Line

If you know which line of your texts always contains the title for the sub-textin question, set this counter to that number, otherwise leave it at 0.

See also: Joiner 216, Filenames 215, Wildcards 216, The buttons 279, Text Converter index 221.

10.7.2.3 Splitter: filenames

Splitter will create lots of small files based on your large one(s).
It creates new filenames 279 on the following basis:
A folder based on the name of the source file is created. Sub-folders are created if there are too many files for a folder.
If a title is detected, each file will contain the title plus a number and .txt. If there is no title, the filename will be the number + .**txt** added as a file extension.
Thus a large file called **HELLO.DAT** will split up into a number of small ones:

```
\HELLODAT\1.txt
\HELLODAT\2.txt
...
\HELLODAT\1\512.txt
```

etc.

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Tips

1. Splitter will start numbering at 1 each session.
2. Note that the small files will probably take up a lot more room than the original large file did. This is because the disk operating system has a fixed minimum file size. A one-character text file will require this minimum size, which will probably be several thousand bytes in size. Even so, I suggest you keep your text files such that each file is a separate text, by using Splitter. When doing word lists and key words lists, though, do them in batches 26.
3. CD-ROM files when copied to your hard disk may be read-only. You can change this attribute using Text Converter 221.

10.7.2.4 Splitter: wildcards

The hash symbol, #, is used as a wildcard to represent any ***number***, so **[FF#]** would find *[FF3]* or *[FF9987]* but not *[FF]* or *[FF 9]* (because there's a space in it) or *[FFhello]*.

***** The asterisk represents any ***string***, so **[FF*** would find all of the above. * is used as the last character in the end-of-text symbol. It would find *[FF anything at all up to the next <Enter>*.

^ The ^ mark represents any single ***letter***, so **[FF??]** would find *[FFZQ]* but none of the others.

? The question mark represents any single ***character*** (including spaces, punctuation, letters), so **[FF??]** would find *[FF 9]* in the above examples, but none of the others.

To represent a genuine **#,^,?** or *****, put each one in double quotes, eg. **"?" "#" "^" "*"**.

See also: Settings 215

10.7.3 join text files

This is a sub-program for joining small text files into bigger ones. You might want this because you aren't interested in the different texts individually but are only interested in studying the patterns of a whole lot of texts.

When you choose **Joiner** you will see something like this:

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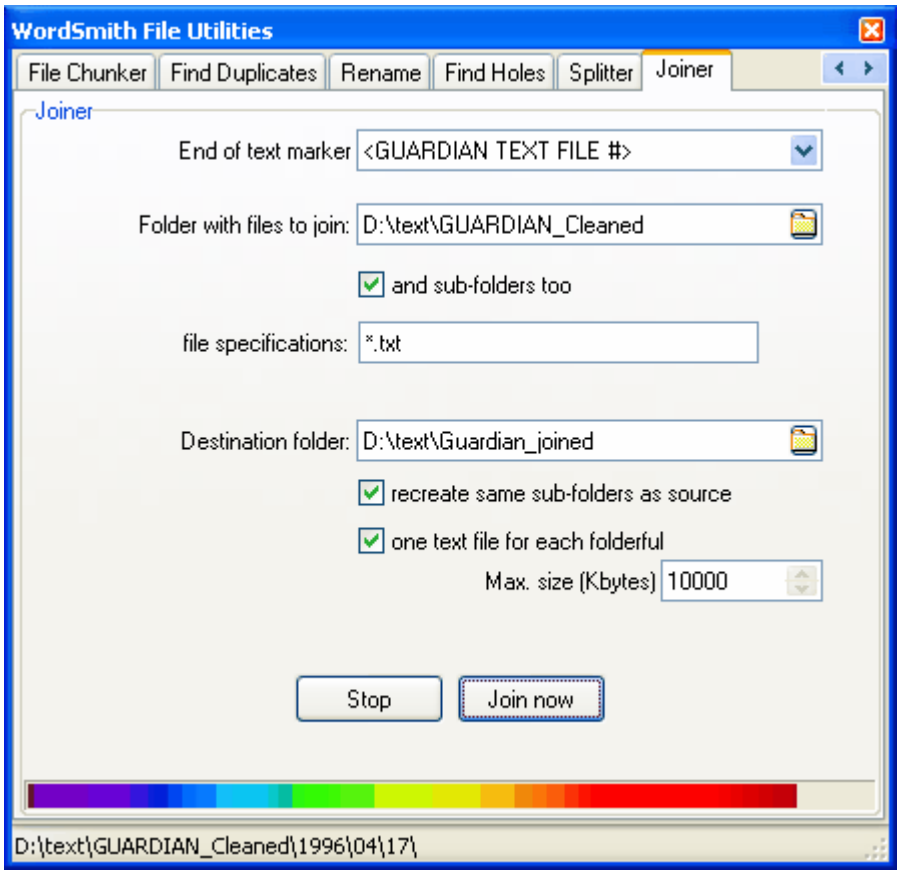

End of text marker

The symbol which will act as an end-of-text separator: eg. **[FF]** or **<end of story>** or **</Text>** or **!#** or **[FF*]** or **[FF?????].** The end-of-text marker will come at the beginning of a line in the original large file. If it includes # this will be replaced by the number of the text as the texts are processed.

Folder with files to join

Where the small files you want to be merged are now. They will not get deleted -- you must merge them into the Destination folder.

and sub-folders too

Check this if you want to process sub-folders of the "folder with files to join".

file specifications

The kinds of text files you want to merge, eg. **`*.*`** or **`*.txt`** or **`*.txt;*.ctx`**.

Destination Folder

Where you want the small files to be copied and merged to. (You'll need write permission to access it if on a network.)

recreate same sub-folders as source

If checked, creates the same structure as in the source. In the example, all the sub-folders of **`d:\text\guardian_cleaned`** will be created below **`d:\text\guardian_joined`**.

one text for each folderful

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if checked, a whole folderful of source texts will go into one text file in the destination.

Max. size (Kbytes)

The maximum size in kilobytes that you want the each merged text file to be. 1000 means you will get almost 1 megabyte of text into each. That is about 150,000 words if there are no tags and the text is in English. This only applies if *one text for each folderful* isn't checked.

Stop button

Does what it says on the caption.

See also: Splitter 214, Text Converter index 221.

10.7.4 compare two files

The point of it

The idea is to be able to check whether 2 files are similar or not. You may often make copies of files and a few weeks later cannot remember what they were. Or you have used File Chunker 218 to copy a big file to floppies and want to be sure the copy is identical to the original.

This program checks whether

a) they are the same size
b) they have the same contents
   (it goes through both, byte by byte, checking whether they match)
c) they have the same attributes
   (file attributes can be "read only" [you cannot alter the file], "system" [a file which Windows thinks is central to your operating system], "hidden" [one which is so important that Bill Gates may be reluctant to even let you know it exists on your disk])
d) they have the same time & date.

How to do it

Specify your 2 files and simply press "Compare".

See also : file chunker 218, find duplicates 219, rename 220

10.7.5 file chunker

The point of it

The idea is to be able to cut up a big file into pieces, so that you can copy it to floppy disks or cdroms. Otherwise how can you get a 5MB file onto 3 or 4 floppy disks and transfer it to another pc?

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Naturally on the other pc, you will later want to restore the chunks to one file.

How to do it: to copy a file

1. Specify your "file to chunk" (the big one you want to copy)
2. Specify your "drive & folder" (where you want to copy the chunks to. If to A: you will be asked to put in a new formatted floppy for each chunk.)
3. Specify the "size of each chunk" (default = 1,400K, which fits on a floppy)
4. Specify whether to "compress while chunking" (compresses the file as it goes along)
5. Press "Copy".

How to do it: to restore a file

1. Specify your "first chunk" (the first chunk you made using this program)
2. Specify which folder to "restore to" (where you want the results)
3. Specify whether to "delete chunks afterwards" (if they are not needed)
4. Press "Restore".

See also : compare two files 218, find duplicates 219, rename 220

10.7.6 find duplicates

The point of it

The idea is to be able to check whether you have files with the same name in different folders. You may often make copies of files and a few weeks later cannot remember where they were.

This program only checks whether the files it is comparing have the same name. (You could use Compare 2 Files 218 to see whether they are in fact identical.) It handles lots of folders, the point being to locate unnecessarily duplicated files or confusing reuse of the same filenames.

How to do it

Specify your Folder 1 and simply press "Search". *Find Duplicates* will go through that folder and any sub-folders and will report any duplicates found.
Or you can specify 2 different folders (e.g. on different drives) and the process compares one set with the other.

See also : compare two files 218, file chunker 218, rename 220

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10.7.7 rename

The point of it

To rename a lot of files at once, in one or more folders. You may have files with excessively long names which do not suit certain applications. Or it is a pain to rename a lot of files one by one.

How to do it

Specify your Folder, whether sub-folders will also be processed, and the kinds of file you want to handle.
The default is *All files* *.*.
Also specify a "mask for new name" and a starting number.

For example, with a mask of SUN and start number 0, the first file found, let's say it was originally **`Quite_a_long_and_Complicated_file.txt`** will be renamed **`SUN0.txt`**. The next file would be **`SUN1.txt`**, and so on. (If the next was **`Quite_a_long_and_Complicated_file.htm`**, that would become **`SUN2.htm`**).

When you press "Find Files", you will see a list of all files meeting these choices. If you now press "Rename" each one will be renamed according to your settings.

See also : compare two files 218, file chunker 218, find duplicates 219

10.8 Text Converter

10.8.1 purpose

This program does a "Search & Replace", on virtually any number of files.

It is very useful for going through large numbers of texts and re-formatting them as you prefer, e. g. taking out unnecessary spaces, ensuring only paragraphs have <Enter> at their ends, changing accented characters, ensuring you have Windows **£** symbols, etc.

converting text

For a simple search-and-replace you can type in the search item and a replacement; for more complex conversions, use a Conversion File 233 so that **Text Converter** knows which symbols or strings to convert. It operates under Windows and saves using the Windows character set 264, but will convert text using DOS or Windows character sets. You can use it to make your text files suitable for use with your Internet browser.
It does a "search and replace" much as in word-processors, but it can do this on lots of text files, one after the other. As it does so, it can also replace up to **any number of** strings, not just one.

Once the conversion file is prepared and Settings 222 specified, the **Text Converter** will read each source file and either create a new version or replace the old one, depending on the over-write setting 222.
You will be able to see the details of how many instances of each string were found and replaced overall.

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filtering files

And/or you may need to make sure texts which meet certain criteria are put into the right folders 231.

Tip

The easiest way to ensure your text files are the way you want, especially if you have a very large number to convert, is to copy a few into a temporary folder and try out your conversion file with the Text Converter. You may find you've failed to specify some necessary conversions. Once you're sure everything is the way you want it, delete the temporary files.

See also: Text Converter Contents 221, The buttons 279

10.8.2 Text Converter: index

Explanations

What is the Text Converter and what's it for? 220
Getting Started... 222
Convert the text format 228
Filters 231
Sample Conversion File 233
Syntax 225
Conversion File 233

See also : WordSmith Main Index 2

10.8.3 Text Converter: extracting from files

The point of it...

The idea is to be able to extract something useful from within larger files. In the example below, I wanted to extract the headlines only from some newspaper text. I knew that the header for each text contained **<DAT>** (date of publication mark-up) and that the headline ended **</HED>**, and I wanted only those chunks which contained the phrase **Leading article:**.

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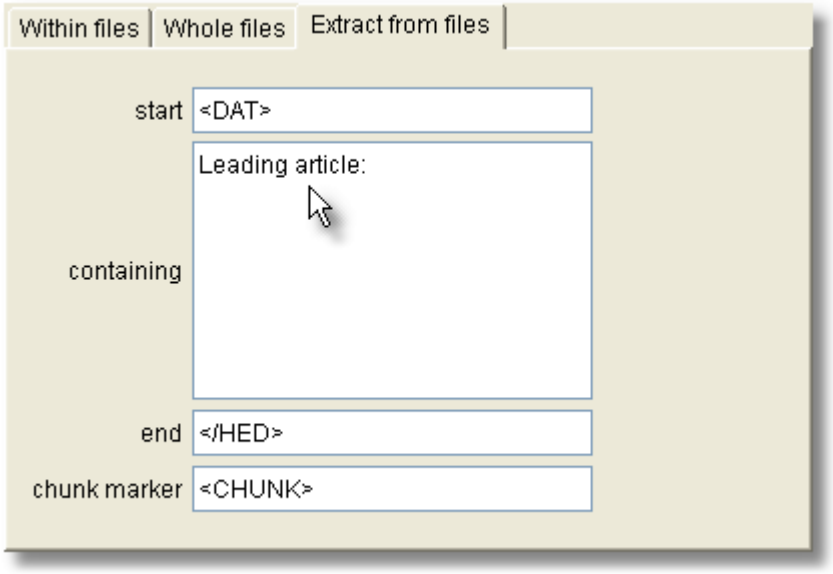

The results I got looked like this:

<CHUNK "1"><DAT>05 August 2001</DAT>
<SOU>The Observer</SOU>
<PAG>26</PAG>
<HED>Comment: Leading article: Ealing's lessons: Time for steel from the peacemakers</HED></CHUNK>
<CHUNK "2"><DAT>05 August 2001</DAT>
<SOU>The Observer</SOU>
<PAG>26</PAG>
<HED>Comment: Leading article: The free market can't house us all: Why Government has to intervene</HED></CHUNK>
<CHUNK "3"><DAT>05 August 2001</DAT>
<SOU>The Observer</SOU>
<PAG>26</PAG>
<HED>Comment: Leading article: What a turn-on: Cat's whiskers are the bee's knees</HED></CHUNK>

Settings

containing : **all** non-blank lines in this box will be required. Leave it blank if you have no requirement that the chunk you want to extract contains any given word or phrase.
chunk marker : Leave blank, otherwise each chunk will be marked up as in the example above, if it begins with **<** and ends with **>**. The reason for this marker is to enable subsequent splitting 215.

10.8.4 Text Converter: settings

1. Choose *Files* (the top left tab). Decide whether you want the program to process sub-folders of the one you choose. There is no limit to the number of files Text Converter can process in one operation.

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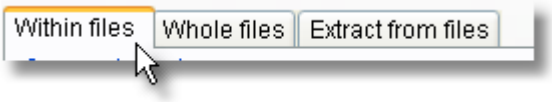
2. Click on the *Conversion* or *Filters* 231 tab, and:
3. Decide whether you want to make copies of the text files, or to over-write the originals. Obviously you must be confident of the changes to choose to over-write; copying however may mean a problem of storage space.

Choose between "Within files", "Whole files" or "Extract from files"



Within files = make some alterations to specific words in each text file, if found
For example, specify what to convert, that is the search-words and what you want them to be replaced with. For a quick conversion you can simply type in a word you want to change and its replacement (e.g. *Just one change* so that **`responsable`** becomes **`responsible`**) or you can choose your own pre-prepared Conversion File 233.

Whole files = make some alterations affecting all the words in each text file
E.g. in the Whole Files section you can choose simply to update legacy files 228 in various ways, e.g. by choosing

Dos to Windows,
Unix to Windows,
MS Word .doc to .txt,
into Unicode,
etc.

Or if you want simply to extract some text from your files, you should choose the Extract from files 221 tab.

If you might want some files not to be converted, or simply don't want any conversions but instead to place files in appropriate sub-folders, choose the Filters 231 tab at the top.

If you choose *Over-write Source texts,* Text Converter will work more quickly and use less disk space, but of course you should be quite sure your conversion file codes are right before starting! See copy to 232 for details of how the folders get replicated in a copy operation.

Note that ***some space on your hard disk will be used even if you plan to over-write***. The conversion process does its work, then if all is well the original file is deleted, and the new version copied. There has to be enough room in the destination folder for the largest of your new files; it is much quicker for it to be on the same drive as the source texts. If it isn't, your permission will be asked to use the same drive.

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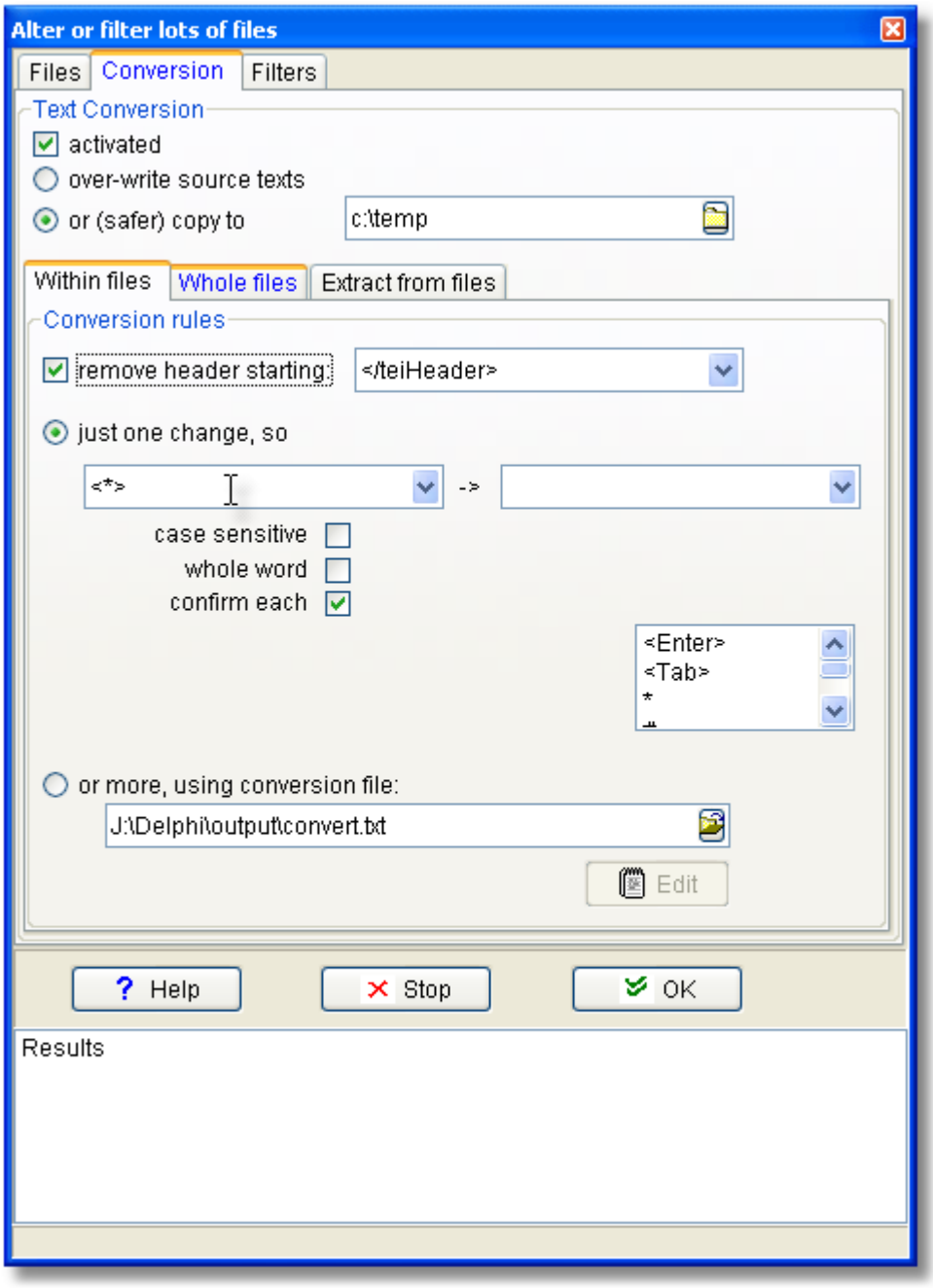
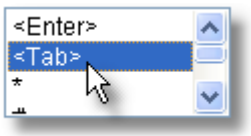


inserting <Tab>, <Enter> etc



Choose in the listbox and drag to one of the windows to left or right of ->. The string inserted will conform to the format 233.

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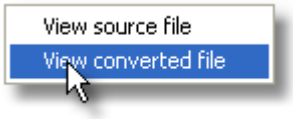
cutting out a header from each file

It can be useful to get a header removed. In the screenshot example, any text which contains **</teiHeader>** will get all the beginning of the file up to that point cut out.

Press *OK* to start; you will see a list of results, as in the screenshot below.
If you want to stop **Text Converter** at any time, click on the Cancel button or press Escape.

Right-click to see the source or the converted result file:



See also: Text Converter Contents 221.

10.8.5 Text Converter: syntax

The syntax for a Conversion File 233 is:

Only lines beginning **/** or **"** are used. Others are ignored completely.
Every string for conversion is of the form **"A" -> "B"**. That is, the original string, the one you're searching for, enclosed in double quotes, is followed by a space, a hyphen, the **>** symbol, and the replacement string.
You can use " (double quotes), hyphen and **>** where you like without any need to substitute them, but for obvious reasons there must not be a sequence like **" -> "** in your search or replace string.

Removing all tags

To remove all tags, choose **"<*>" -> ""** as your search string.

Control Codes

Control codes can be symbolised like this: {CHR(xxx)} where xxx is the number of the code.
Examples: **{CHR(13)}** is a carriage-return, **{CHR(10)}** is a line-feed, **{CHR(9)}** is a tab, **{CHR(12)}** is a printer form-feed. To represent <*Enter*> which comes at the end of paragraphs and sometimes at the end of each line, you'd type **{CHR(13)}{CHR(10)}** which is carriage-return followed immediately by line-feed.
Use **{CHR(34)}** if you need to refer to double inverted commas.

Wildcards (*,}}},?,# and ~)

***** You can use the asterisk as a wildcard. Thus "<*>" -> "" will delete any single-word string in < > brackets from your text.
}}} This is used to mean any string at all whether containing one word or more. "<head }}}/head>" will delete any string starting "<head " and ending "/head>", even if there are hundreds of characters between them. The default search distance is 1,000 characters, with a maximum of 25,000. As deleting a lot of text can get rid of more text than you expect if the text is not properly marked up in the first place, you will probably need to over-ride the default search distance by specifying it in brackets, e.g. "<head }}}(100)/head>".}}} or * may not be the first or last symbol

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between the double quotation marks in the search-string.
Use # to symbolise any number. **"<div#>"** will find **<div1>, <div2> , <div468>**, etc. If **#** is in the replacement too, the exact same number will be used in the replacement. Thus **"<div#>" -> "[section #]"** will produce **[section 468]** if the original has **<div468>**.
? The question mark stands for any single character, except a space. Up to ten **?**s can be used in the replacement string to reproduce the character referred to by the **?**s in the search-string.
~ The tilde means except. **~"<p>" "<*>" -> ""** means delete everything in between angle brackets, except a case of **<p>**.

Use **{CHR(42)}** if you need to refer to ***, {CHR(35)}** for **#, {CHR(63)}** for **?** and **{CHR (126)}** for **~**.

Whole word, case Insensitive, Confirm, redundant Spaces, redundant <Enter>s

/C stops to confirm you wish to go ahead before each change.
/W does a whole word search (ensuring the alteration only happens if there's a word separator 269 on either side) (/W "the" finds *the* but not *other* or *then* or *bathe*).
/I does a case insensitive search (/I "restaurant" -> "hotel" replaces *restaurant* with *hotel* and *RESTAURANT* with *HOTEL* and *Restaurant* with *Hotel*, i.e. respecting case as far as possible). You can combine these, e.g.
/IWC "the" -> "this"
/S cuts out all redundant spaces. That is, it will reduce any sequence of two or more spaces to one, and it also removes some common formatting problems such as a lone space after a carriage-return or before punctuation marks such as .,; and). **/S** can be used on a line of its own or in combination with other searches.
/E cuts out all redundant <Enter>s. That is, it will reduce any sequence of two or more carriage-return+line-feeds (what you get when you press Enter or Return) to one. **/E** can be used on a line of its own or in combination with other searches.

See **Program Files\wsmith5\convert.txt** to see examples in use.

See also: Text Converter Contents 221.

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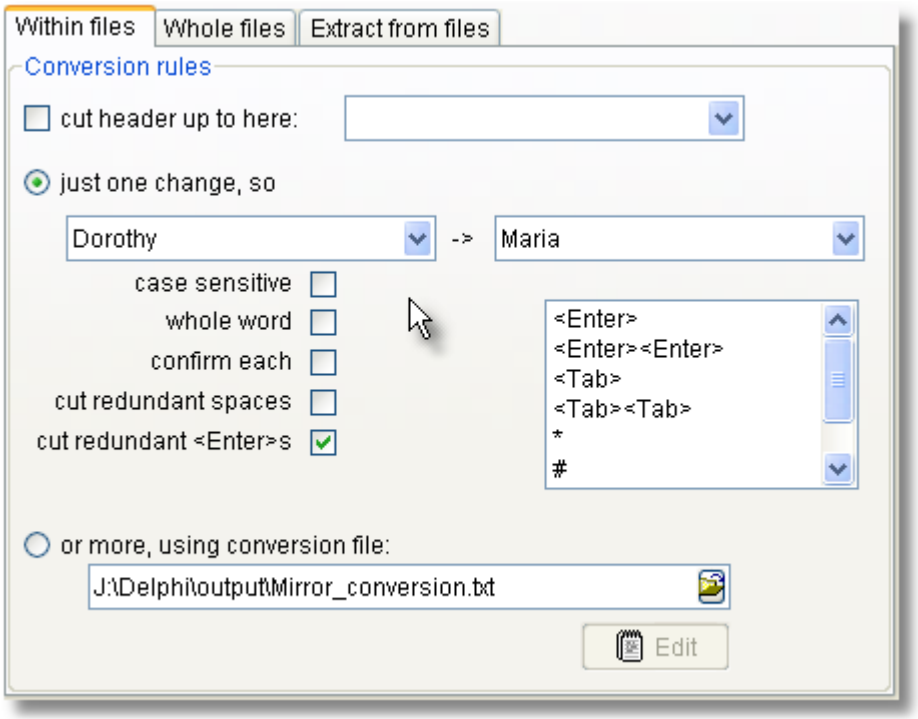
10.8.6 Convert within the text file

Your choices here are 3:

1. cut out a header



and/or

2. make one change only or
3. use a script to determine a whole set of changes. There is an sample 233 to see.

If you make one change only you type something into the left box which gets replaced by what is in the right box. In the case above it might be best to check the *confirm each* box too if there's any danger of confusing two different Dorothies with each other. The box which *is* checked will get rid of excessive <Enter>s. Or . :

See also: convert whole file 228, sample conversion file 233, syntax 225, Text Converter Contents 221.

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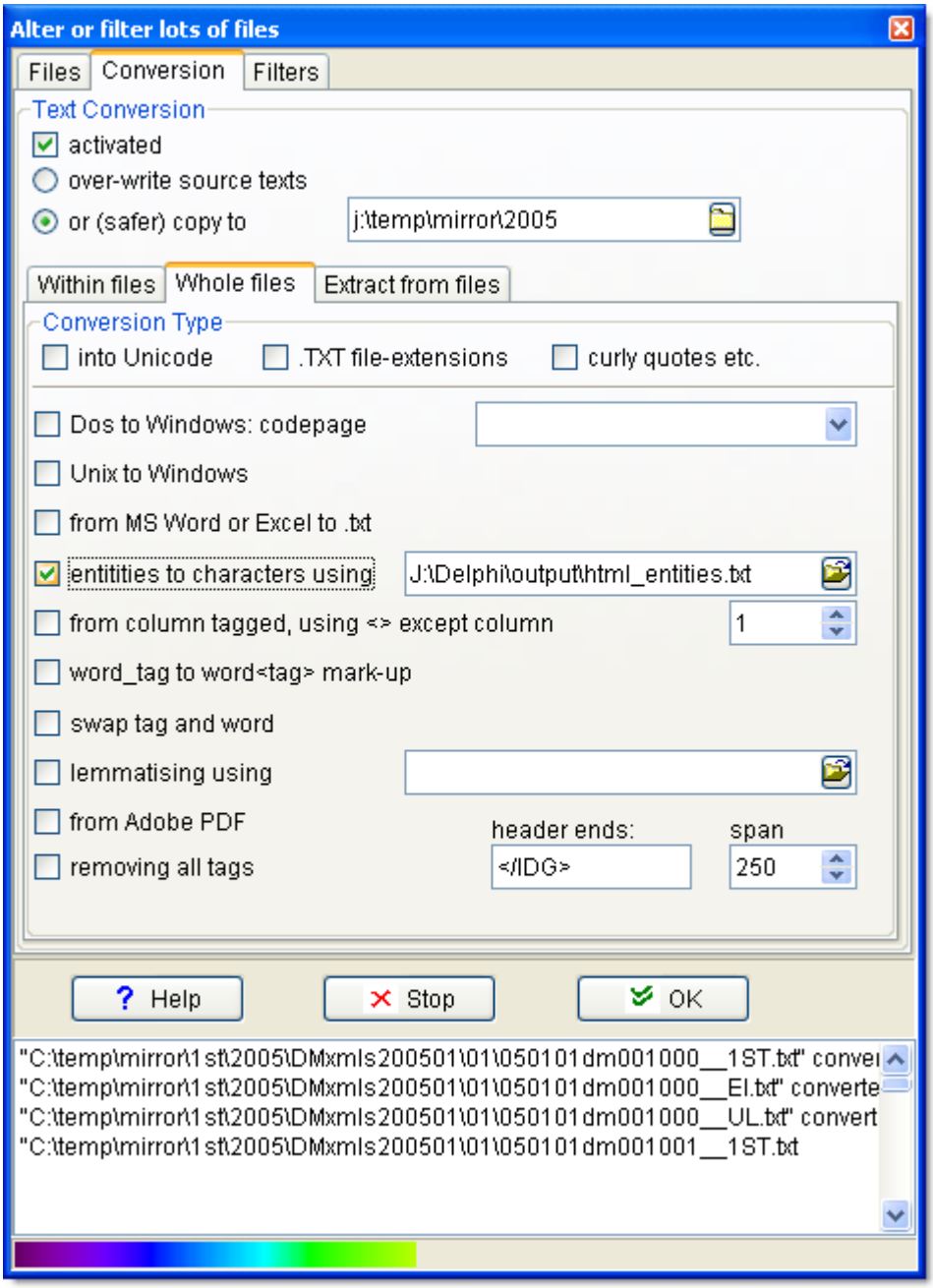
10.8.7 Convert Text File Format

To convert a series of whole text files from one format to another, choose between these options:



These formats allow you to convert into formats which will be suited to text processing.

into Unicode:

.... this is a better standard than ANSI as it allows many more characters to be used, suiting lots of languages. This is UTF16 Unicode, 2 bytes for each character. (UTF8, a format which was

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devised for many languages some years ago when disk space was limited and character encoding was problematic, is generally **not** suitable. That's because it uses a variable number of bytes to represent the different characters. A to Z will be only 1 byte but for example Japanese characters may well need 2, 3 or even more bytes to represent one character.)

TXT file extensions:

... makes the filename end in **.txt** (so that Notepad will open without hassling you; Windows was baffled by the empty filenames of the BNC editions prior to the XML edition). If you choose this you will be asked whether to force **.txt** onto all files regardless, or only ones which have no file extension at all.

curly quotes etc.:

... changes any curly single or double quote marks or apostrophes into straight ones, ellipses into three dots, and dashes into hyphens.

DOS to Windows:

... choose the "codepage" that your old DOS texts were encoded with, eg. DOS 850 Multilingual.

Unix to Windows:

... Unix-saved texts don't use the same codes for end-of-paragraph as Windows-saved ones.

from MS Word or Excel to .txt

... like using "Save as Text" in Word or Excel. Handles **.doc** and **.xls** files.

entities to characters using:

... converts HTML or XML symbols which are hard to read such as **é** to ones like **é**. Specify these in a text file: **html_entities.txt** comes with WordSmith so is in your Program Files\wsmith5 folder; look inside and you'll see the syntax.

from column tagged, using <> except column

... The Stuttgart Tree Tagger produces output like this separating 3 aspects of each word with a <tab>:

```
word          pos       lemma
The           DT        the
TreeTagger    NP        TreeTagger
is            VBZ       be
easy          JJ        easy
to            TO        to
use           VB        use
```

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. SENT .

If you set the column to 1, Text Converter will convert this to

The<DT><the> TreeTagger<NP><TreeTagger> is<VBZ><be> easy<JJ><easy> to<TO><to> us

(it will present the text as running text, no longer in columns, but with a break every 80 characters.)

word_tag to word<tag> mark-up

... converts text like

It_PP is_VBZ easy_JJ

to

It<PP> is<VBZ> easy<JJ>

swap tag and word

... converts text like

It<PP> is<VBZ> easy<JJ>

to

<PP>It <VBZ>is <JJ>easy

or vice-versa. In other words swapping the order of tags and words. The procedure effects a swap at each space in the non-tagged text sequence.

lemmatised using ...

... converts each file using a lemma file 158. Where your source text has "**she was tired**" and your lemma file has **BE -> AM, WAS, WERE, IS, ARE**, then you will get "**she be tired**" in your converted text file. Where your source text has "**Was she tired?**" you'll get "**Be she tired?**"

from Adobe PDF

... into plain text. Not guaranteed to work with every .PDF as formats have changed and some are complex.

removing all tags

... would convert **The<DT><the> TreeTagger<NP><TreeTagger> is<VBZ>**... into **The Treetagger is**. Can plough through a copy of the whole BNC, for example, and make it readable. If you have specified a header string it will cut the header up to that point too. Uses the selected span for looking for the next **>** when it finds a **<**.

See also: convert within text files 227, Guide to handling the BNC

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10.8.8 Text Converter filtering: move if

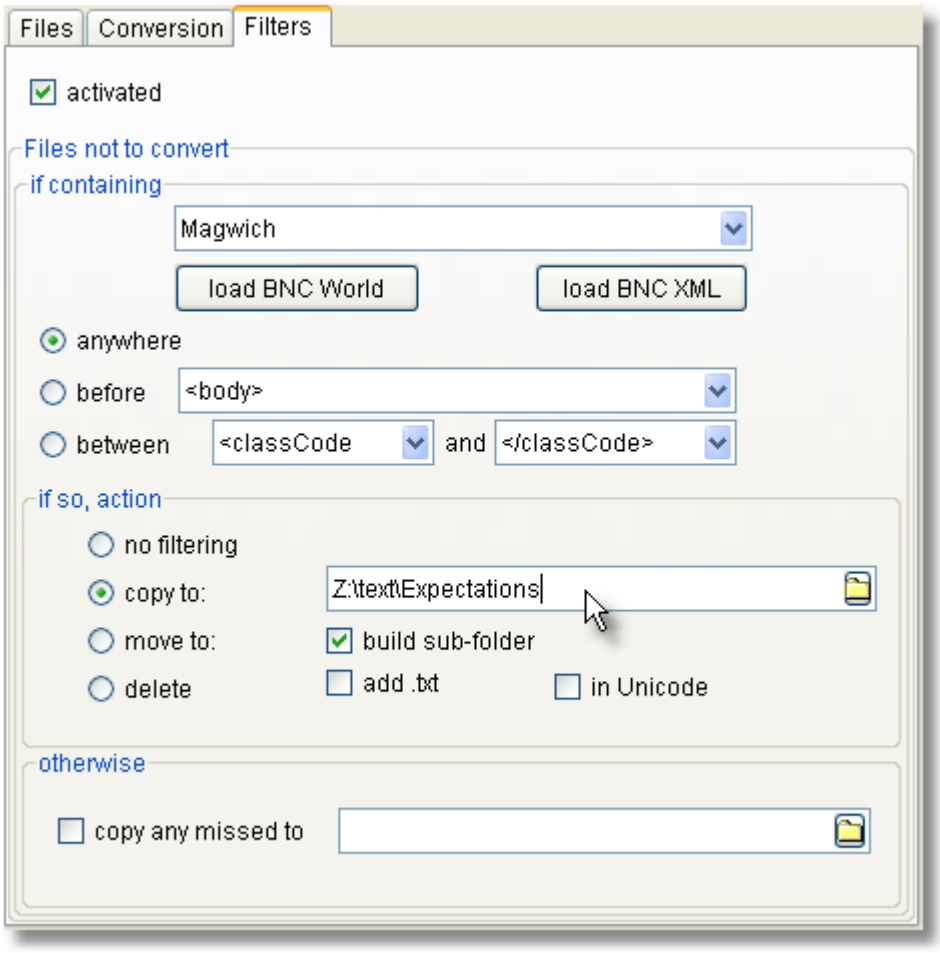
This function allows you to specify a word or phrase, look for it in each file, and if it's found move that file into a new folder.

The point of it …

Suppose you have a whole set of files some of which contain dialogues between Pip and Magwich, others containing references to the Great Wall of China or the anatomy of fleas. You want those with the Pip-Magwich dialogues and you want them to go into a folder called *Expectations*.

How to do it

1. Click on the *Filters* tab (at the top).
2. Now the *Activated* checkbox.



3. Specify a word or phrase the text must contain. This is case sensitive. In this case **`Magwich`** has been specified.
4. Choose whether that word or phrase has to be found
   - anywhere in the text,
   - anywhere before some other word or phrase, or
   - between 2 different words or phrases.
5. Decide what happens if the conditions are met:

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- nothing, i.e. ignore that text file
- copy to a certain folder, or
- move to that folder, or
- delete the file (careful!).

You can also decide to build a sub-folder based on the word or phrase you chose in #3. (The idea is to get your corpus split up into useful sub-folders whose names mean something to you.) And you may have the program add **.txt** (useful if as with the BNC World Edition there are no file extensions) and/or convert it to Unicode.
You could also have any texts not containing the word **Magwich** copied to a specified folder.
The *load BNC World* and *load BNC XML* buttons are specific to those two editions of the BNC and read text files with similar names which you will find in your **Program Files\wsmith5** folder.

See also: Text Converter Contents 221.

10.8.9 Text Converter: copy to

If you choose to copy the files you are converting, instead of converting or filtering them in place, which is a lot safer, the new files created will be structured like this.

Suppose you are processing **d:\texts\2007\literature** and copying to **c:\temp** and suppose **d:\texts\2007\literature** contains this sort of thing:

```
d:\texts\2007\literature\shakespeare\hamlet.pdf
d:\texts\2007\literature\shakespeare\macbeth.pdf
...
d:\texts\2007\literature\shakespeare\poetry\sonnet1.pdf
d:\texts\2007\literature\shakespeare\poetry\sonnet2.pdf
...
d:\texts\2007\literature\french\victor hugo\miserables.pdf
d:\texts\2007\literature\french\poetry\baudelaire\le chat.pdf
...
```

you will get

```
c:\temp\shakespeare\hamlet.txt
c:\temp\shakespeare\macbeth.txt
...
c:\temp\shakespeare\poetry\sonnet1.txt
c:\temp\shakespeare\poetry\sonnet2.txt
...
c:\temp\french\victor hugo\miserables.txt
c:\temp\french\poetry\baudelaire\le chat.txt
...
```

In other words, for each file successfully converted or filtered, any same directory structure beyond the starting point (**d:\texts\2007\literature** in the example above) will get appended to the destination.

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10.8.10 Text Converter: sample conversion file

You could copy all or part of this to the clipboard 265 and paste it into notepad.

```
   [ comment line -- put whatever you like here, it'll be ignored ]

   [ first a spelling correction ]
 "responsable" -> "responsible"

   [ now let's change brackets from < > to [ ] and { } to ( ) ]
 "<" -> "["
 ">" -> "]"
 "}" -> ")"
 "{" -> ")"
 /S
   [ that will clear all redundant spaces]
```

The file **Program Files\wsmith5\convert.txt** is a sample conversion file for use with British National Corpus text files.

See also: Text Converter Contents 221.

10.8.10.1 Text Converter conversion file

Prepare your Text Converter conversion file using a plain text editor such as Notepad.
You could use **Program Files\wsmith5\convert.txt** as a basis.

If you have accented characters 264 in your original files, use the DOS editor to prepare the conversion file if they were originally written under DOS and a Windows editor if they were written in a Windows word-processor. Some Windows word processors can handle either format.

There can be any number of lines for conversion, and each one can contain two strings, delimited with " " quotes, each of up to 80 characters in length.
The Text Converter makes all changes in order, as specified in the Conversion File. Remember one alteration may well affect subsequent ones.

Alterations that increase the original file

Most changes reduce the size of an original. But Text Converter will cope even if you need to increase the original file -- as long as there's disk space!

Tip

To get rid of the <Enter> at line ends but not at paragraph ends, first examine your paragraph ends to see what is unique about them. If for example, paragraphs end with two <Enters>, use the following lines in your conversion file:
"{CHR(13)}{CHR(10)}{CHR(13)}{CHR(10)}" -> "{%%}"
(this line replaces the two <Enters> with **{%%}** .) (It could be any other unique combination. It'll be slightly faster if you make the search and the replacement the same length, as in this case, 4 characters)
"{CHR(13)}{CHR(10)}" -> " "
(this line replaces all other <Enters> with a space, to keep words separate)
"{%%}" -> "{CHR(13)}{CHR(10)}{CHR(13)}{CHR(10)}"
(this line replaces the **{%%}** combination with <Enter><Enter>, thus restoring the original paragraph structure)

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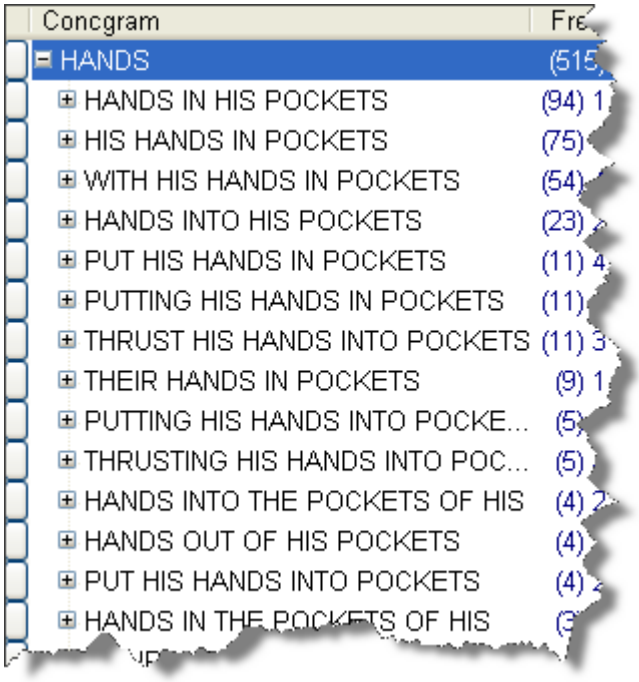
/S
(this line cuts out all redundant spaces)

See also: sample conversion file 233, syntax 225, Text Converter Contents 221.

10.9 WSConcGram

10.9.1 aims of WSConcGram

A program for finding concgrams 234, essentially related pairs, triplets, quadruplets (etc.) of words which are related.



See also : definition of concgram 234, settings 236, running WSConcGram 237, filtering 244, viewing the output 239.

10.9.2 definition of a concgram

For years it has been easy to search for or identify consecutive clusters (n-grams) such as **AT THE END OF, MERRY CHRISTMAS** or **TERM TIME**. It has also been possible to find non-consecutive linkages such as **STRONG** within the horizons 96 of **TEA** by adapting searches to find context words 113. The concgram procedure takes a whole corpus of text and finds all sorts of combinations like the ones above, whether consecutive or not.

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Cheng, Greaves & Warren (2006:414) define a concgram like this

> For our purposes, a 'concgram' is all of the permutations of constituency variation and positional variation generated by the association of two or more words. This means that the associated words comprising a particular concgram may be the source of a number of 'collocational patterns' (Sinclair 2004:xxvii). In fact, the hunt for what we term 'concgrams' has a fairly long history dating back to the 1980s (Sinclair 2005, personal communication) when the Cobuild team at the University of Birmingham led by Professor John Sinclair attempted, with limited success, to devise the means to automatically search for non-contiguous sequences of associated words.

Essentially what they were seeking in developing the ConcGram (©) program was "a search-engine, which on top of the capability to handle constituency variation (i.e. AB, ACB), also handles positional variation (i.e. AB, BA), conducts fully automated searches, and searches for word associations of any size." (2006:413)

WSConcGram is developed in homage to this idea.

See also: bibliography 262, settings 236, running WSConcGram 237, filtering 244, viewing the output 239.

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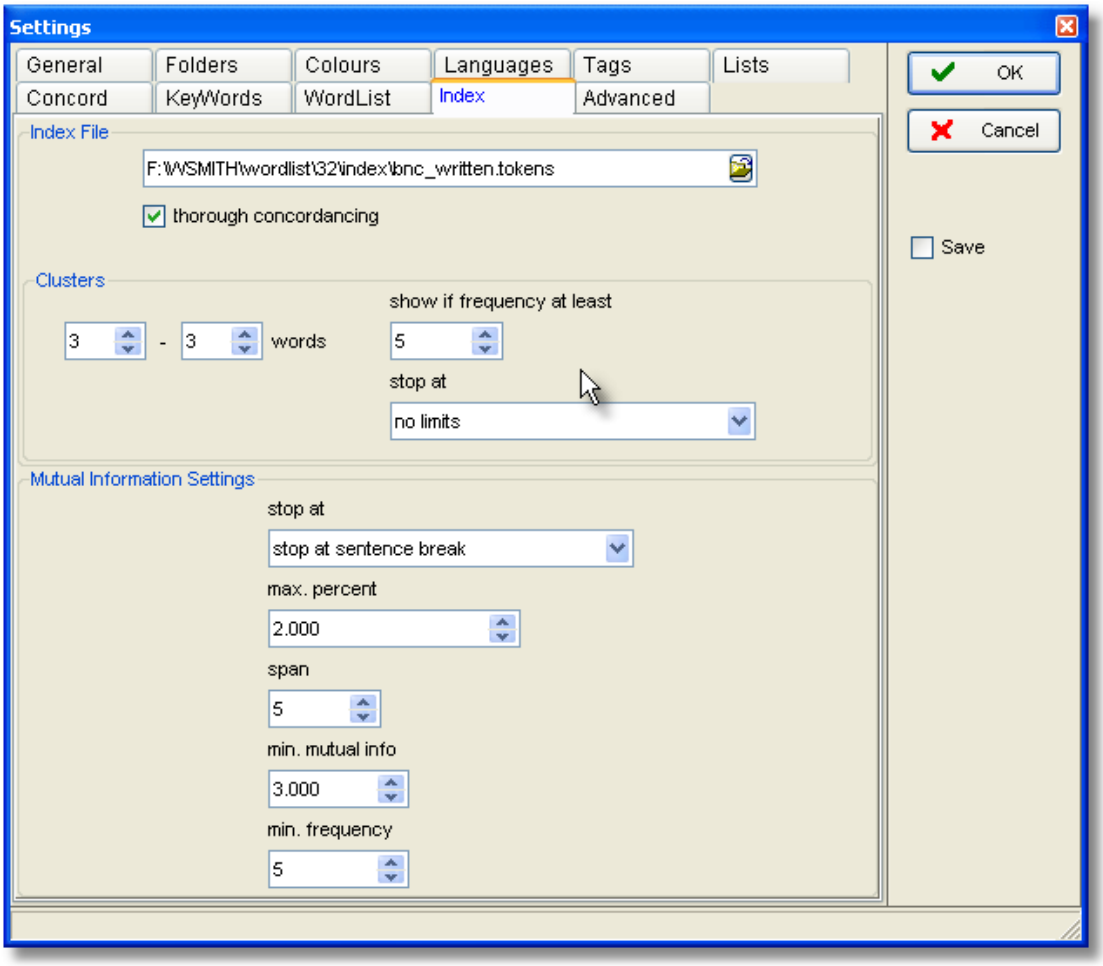
10.9.3 WSConcGram Settings

The settings initially use those for an Index 168.



and when you're viewing the output,

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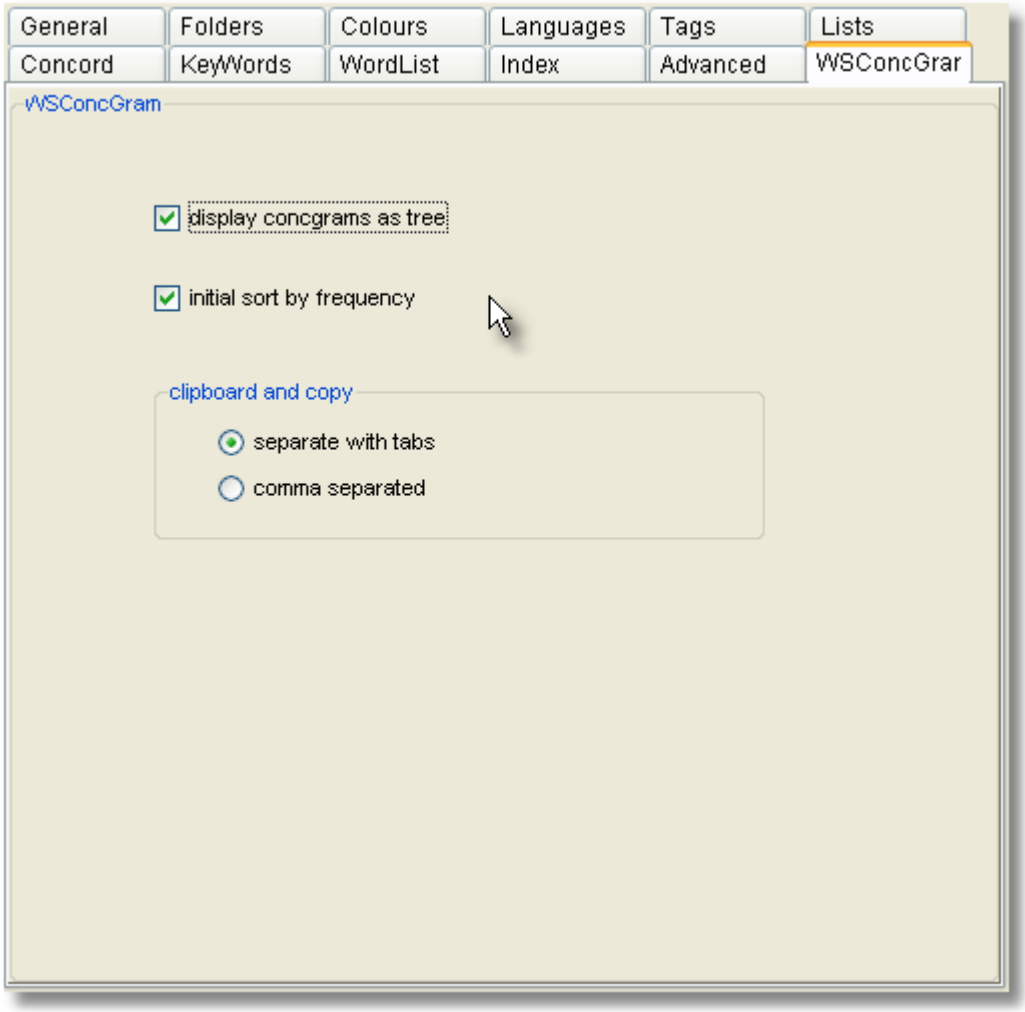
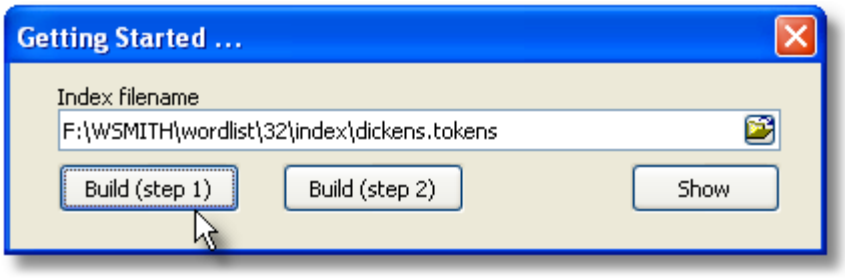


10.9.4 generating concgrams

To start, as usual, choose *File* | *New*.

In the *Getting Started* window, first choose an existing Index, as here where an index based on the works of Dickens has been selected.



To generate the concgrams, the program will then need to build some further files based on the existing index files:

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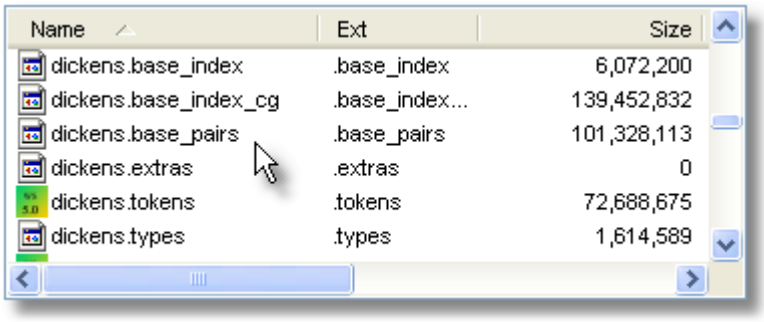
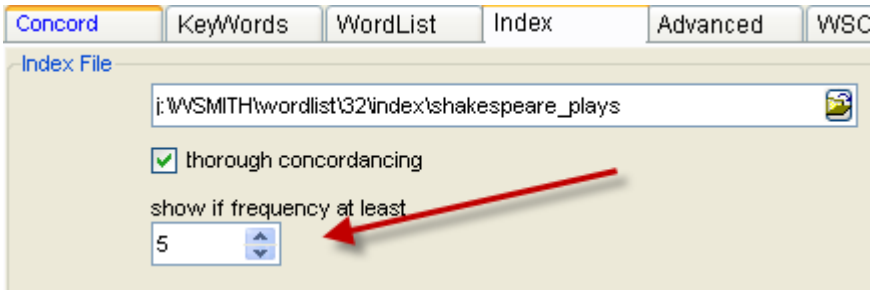


There are two steps simply because there's a lot of work if the original index is large. You can stop after the first stage and resume the next day if you wish. With a modern PC and a source text corpus of only a few million words, though, it should be possible to generate the files in a matter of a few minutes.

As you see above, some large additional files have been generated at the end of the two *Build steps* marked on the buttons in the top window.

All items which are found together at least as often as set in the Index settings (here 5 times)



will be saved as potential members of each concgram.

Now, choose Show to view 239 the results. (Or, as usual, right-click the main WSConcgram window and choose *last file*).

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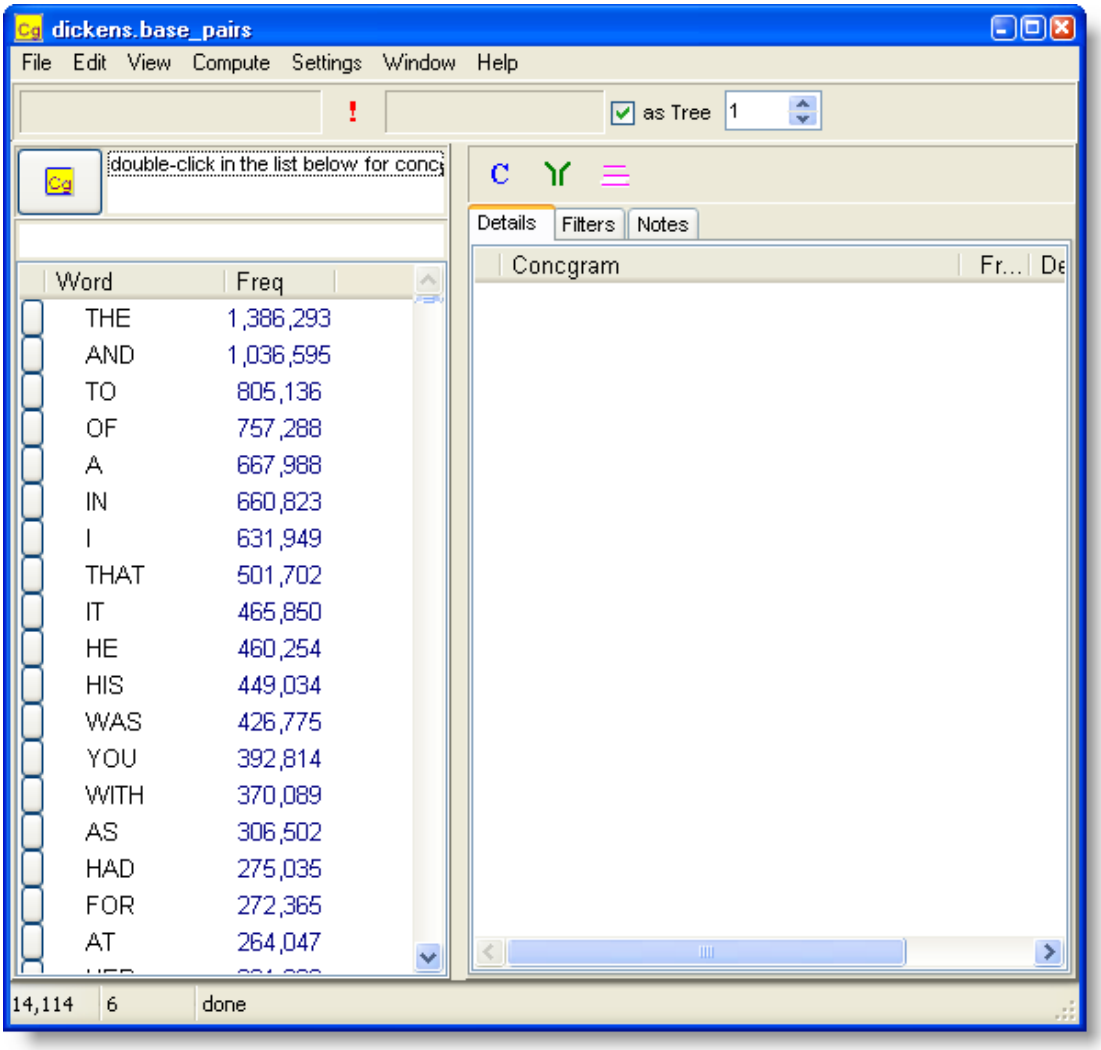
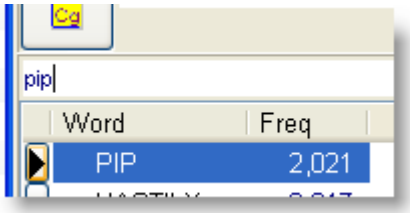
10.9.5 viewing concgrams

When you first open a concgram file created by WSConcGram, it will look something like this one



It'll appear (by default) in frequency order as set in the settings [236] but you can sort it by pressing the *Word* and *Freq* headers, and can search for items using the little box above the list.



To get a detailed set of concgrams, double-click an item such as **PIP** (the hero of *Great Expectations*), or drag it to the list-box above. Then press the concgram button beside that.

You then get a tree view like this

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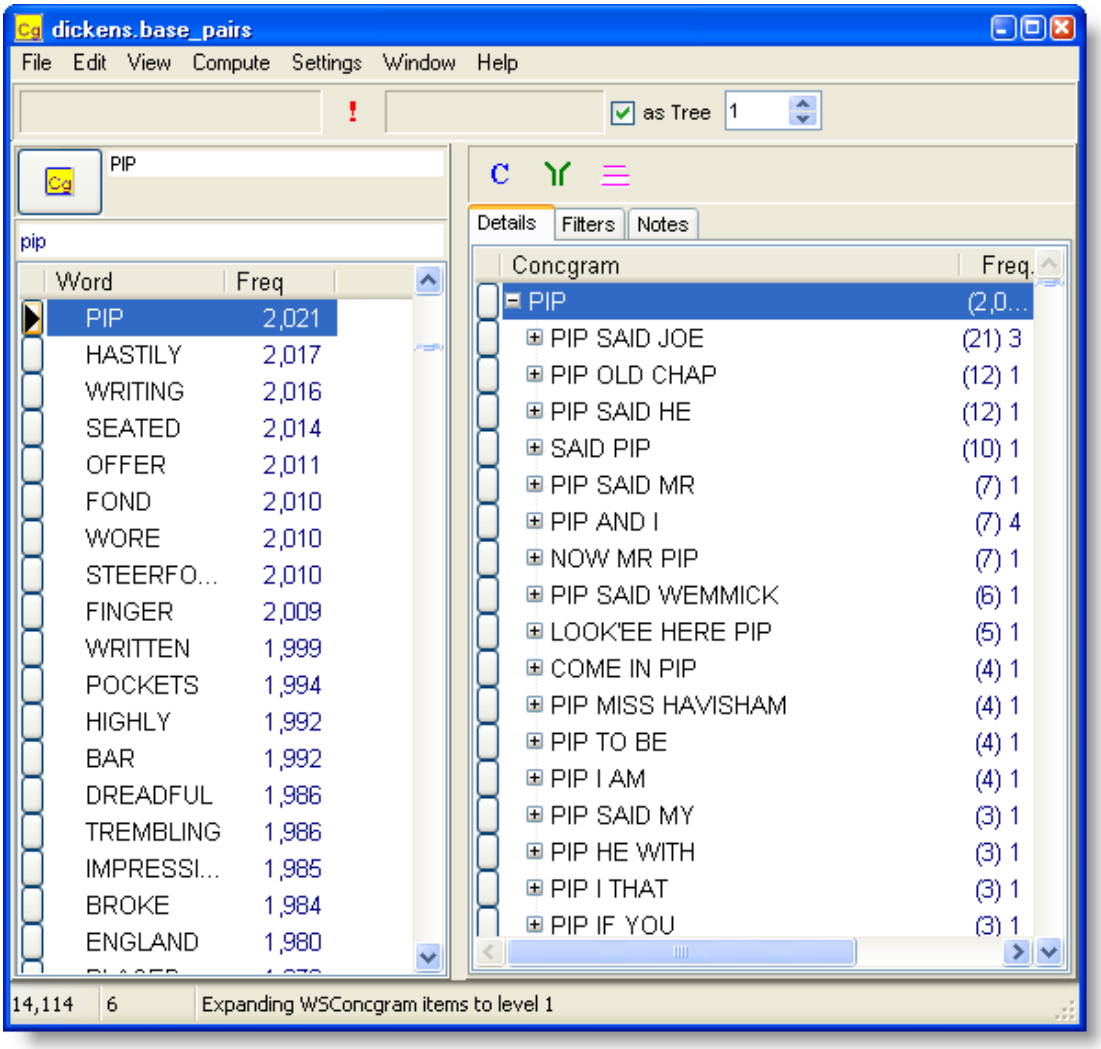

where similar items are grouped. Each branch of the tree shows how many sub-items and how many items of its own it has. In the example above, **PIP SAID JOE** has (21) items; there are 3 cases of **PIP SAID JOE** and a further 18 with **PIP SAID JOE** plus another word or two: the (20) =6+14.

The other controls are used for suspending lengthy processing ( ) changing from a tree-view to a list, for concordancing ( ), for filtering 244 ( ), clearing filters ( ), and showing more or less of the tree ( ).
So if you prefer a plain list, click *as Tree* to view like this:

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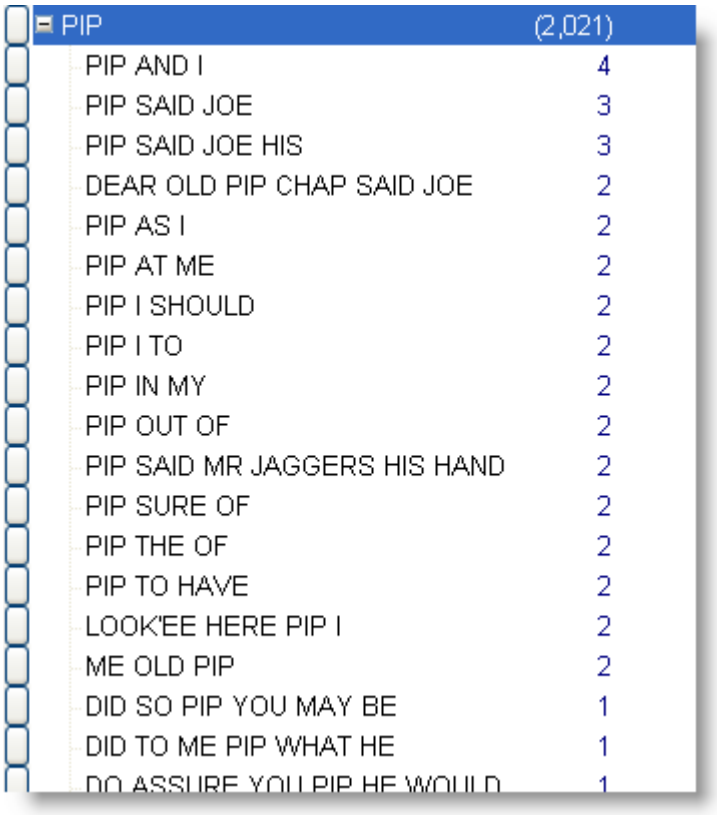

You may if you like select several items like this:

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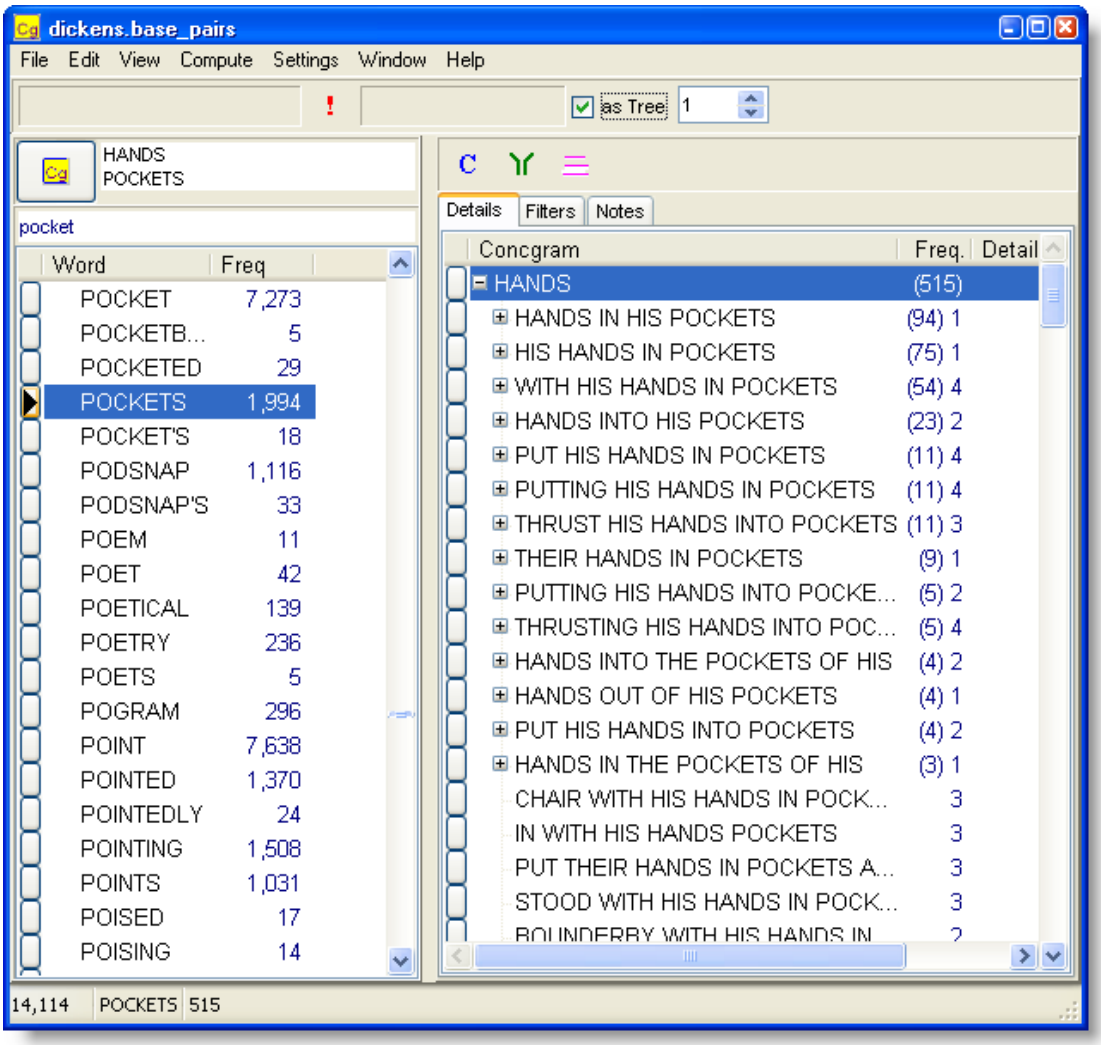

but do note that the concgrams will have to contain *all* of the words selected.

After filtering 244 appropriately and pressing the Concordance button

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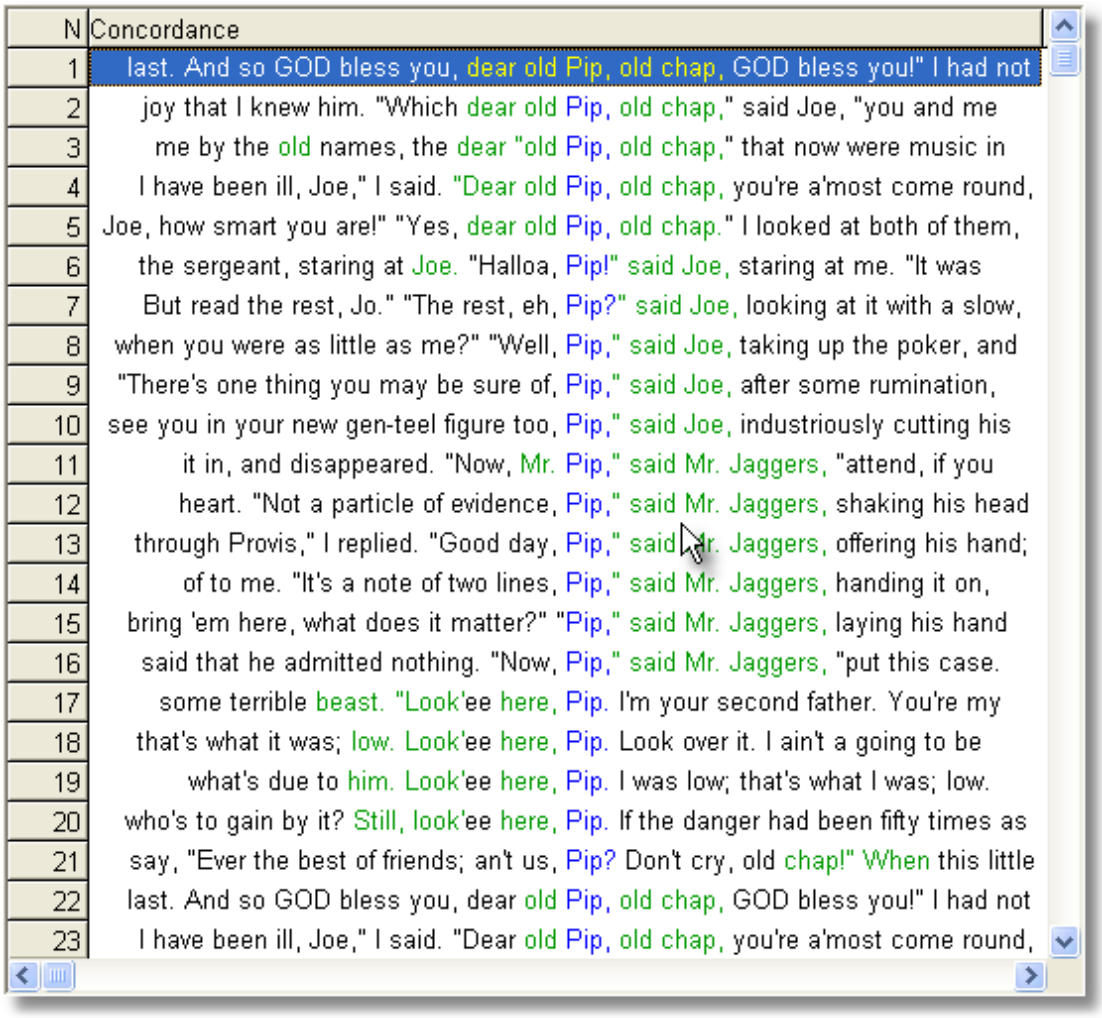
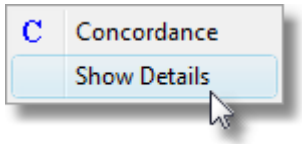


N	Concordance
1	last. And so GOD bless you, dear old Pip, old chap, GOD bless you!" I had not
2	joy that I knew him. "Which dear old Pip, old chap," said Joe, "you and me
3	me by the old names, the dear "old Pip, old chap," that now were music in
4	I have been ill, Joe," I said. "Dear old Pip, old chap, you're a'most come round,
5	Joe, how smart you are!" "Yes, dear old Pip, old chap." I looked at both of them,
6	the sergeant, staring at Joe. "Halloa, Pip!" said Joe, staring at me. "It was
7	But read the rest, Jo." "The rest, eh, Pip?" said Joe, looking at it with a slow,
8	when you were as little as me?" "Well, Pip," said Joe, taking up the poker, and
9	"There's one thing you may be sure of, Pip," said Joe, after some rumination,
10	see you in your new gen-teel figure too, Pip," said Joe, industriously cutting his
11	it in, and disappeared. "Now, Mr. Pip," said Mr. Jaggers, "attend, if you
12	heart. "Not a particle of evidence, Pip," said Mr. Jaggers, shaking his head
13	through Provis," I replied. "Good day, Pip," said Mr. Jaggers, offering his hand;
14	of to me. "It's a note of two lines, Pip," said Mr. Jaggers, handing it on,
15	bring 'em here, what does it matter?" "Pip," said Mr. Jaggers, laying his hand
16	said that he admitted nothing. "Now, Pip," said Mr. Jaggers, "put this case.
17	some terrible beast. "Look'ee here, Pip. I'm your second father. You're my
18	that's what it was; low. Look'ee here, Pip. Look over it. I ain't a going to be
19	what's due to him. Look'ee here, Pip. I was low; that's what I was; low.
20	who's to gain by it? Still, look'ee here, Pip. If the danger had been fifty times as
21	say, "Ever the best of friends; an't us, Pip? Don't cry, old chap!" When this little
22	last. And so GOD bless you, dear old Pip, old chap, GOD bless you!" I had not
23	I have been ill, Joe," I said. "Dear old Pip, old chap, you're a'most come round,



If you right-click and choose Show Details you'll get to see the details of any section of the tree you have selected:

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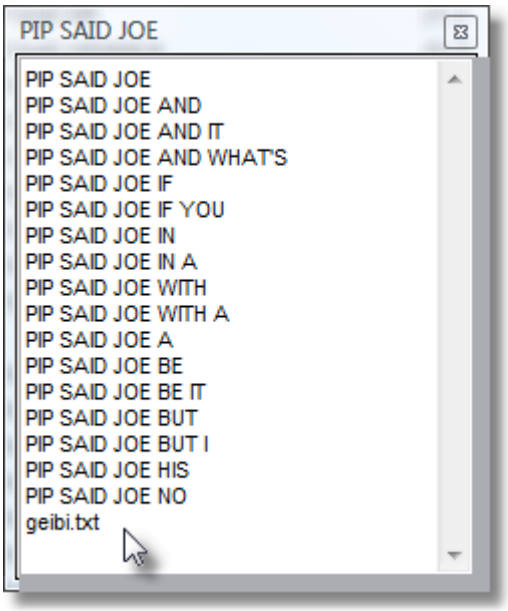

where you see the various forms and the filename(s) they came from.

10.9.6 filtering concgrams

In order to select which items are "associated", we need some sort of suitable statistical procedures. The members of each concgram are at present merely associated by co-occurring at least a certain number of times as explained in generating 237 them

The Filters window allows you to specify, for example, that you want to see only those which are associated with a MI (mutual information) score of 2.0 or a Log Likelihood score of 3.0.

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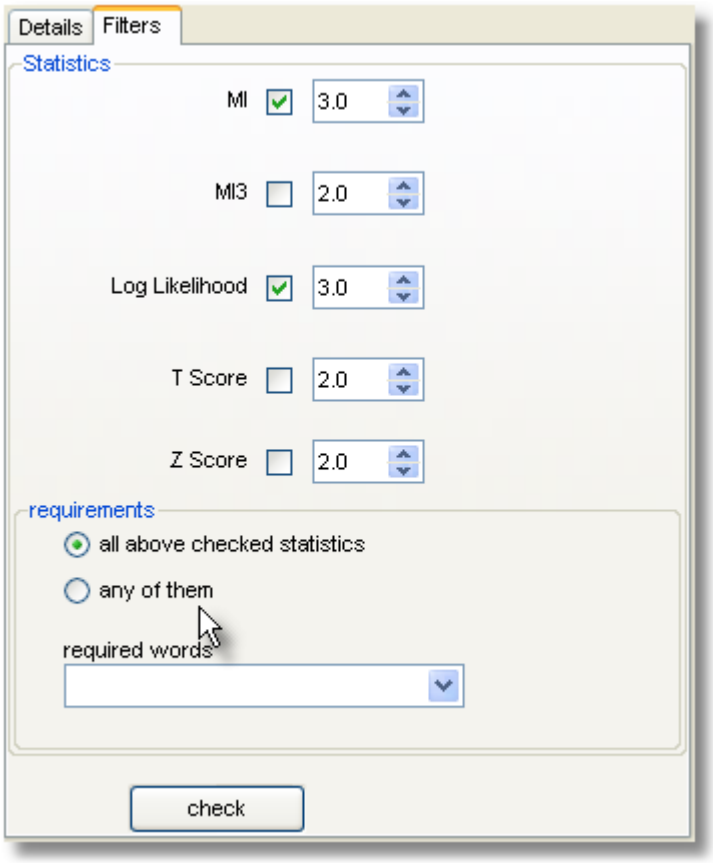
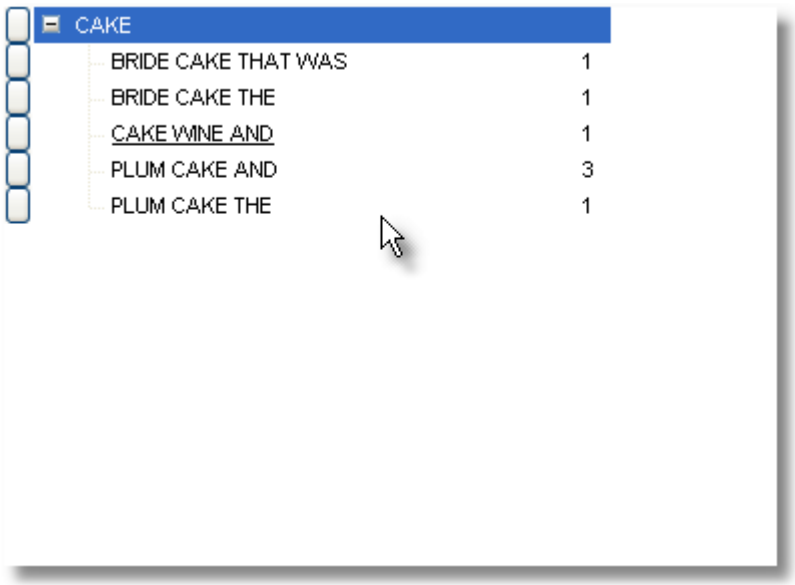


Ensure the statistics you need are checked and set to suitable thresholds, and decide whether all the thresholds have to be met (in the case above both MI and Log Likelihood would have to score 3.0 at least) or any of them (in the case above MI at 3.0 or above or Log Likelihood at 3.0 or above). You can also optionally insist on certain words being in your filtered results.

When you press *check*, you will see something like this:



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where the items which meet the filter requirements are separated out and selected ready for concordancing; any others are hidden. In this case some items like **CAKE IN A**, **CAKE ON WHICH** were hidden.

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WordSmith Tools

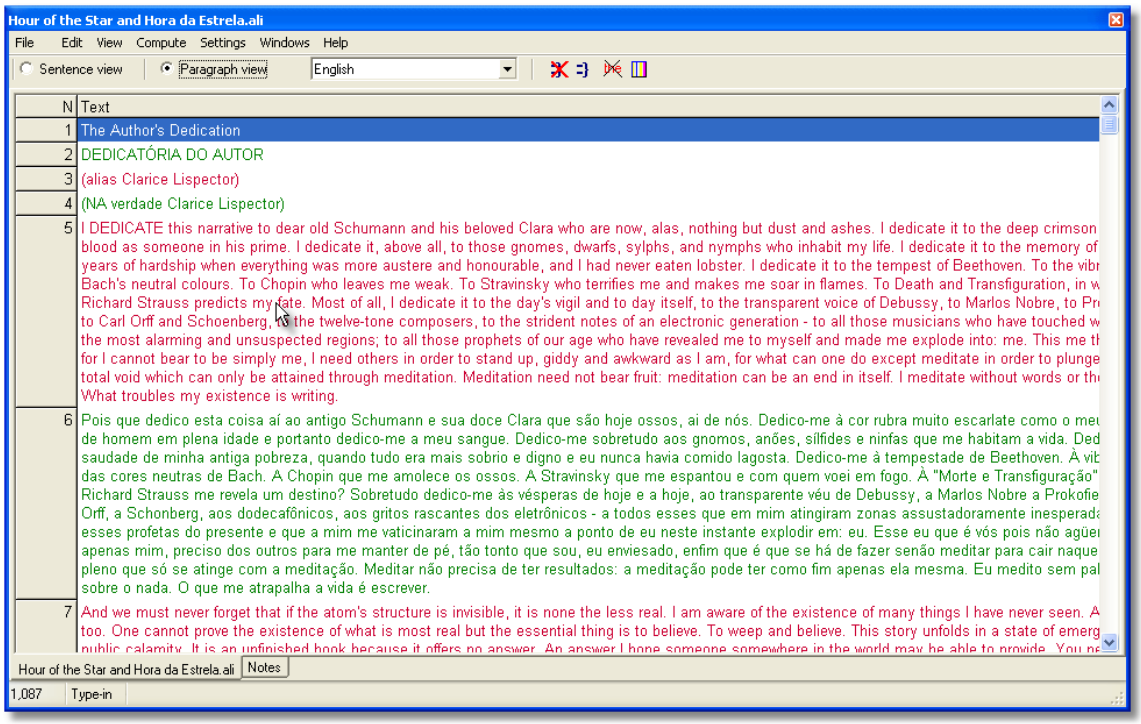
Viewer and Aligner

11 Viewer and Aligner

11.1 purpose

This is a program for showing your text or other files, highlighting words of interest. You will see them in plain text format, with tag mark-up shown or hidden as in your tag settings. There are a number of settings 256 and options 253 you can change.

Its main use is to produce an aligned 249 version of 2 or more texts, with alternate sentences or paragraphs from each of them.



See also: Viewer & Aligner settings 256, Viewer & Aligner options 253, an example of aligning 249

11.2 index

Explanations

What is the Viewer & Aligner and what's it for? 248
an example of aligning 249
Settings 256
Viewing Options 253
What to do if it doesn't do what I want... 292
Searching for Short Sentences 258

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Joining/Splitting 256
Aligning a Dual Text 252
Finding translation mis-matches 257
The technical side... 257

see also : WordSmith Main Index 2

11.3 aligning with Viewer & Aligner

This feature aligns the sentences in two files. Translators need to study differences between an original and a translation. Other linguists might want it to study differences between two versions of a text in the same language. Students of different languages 30 can use it as they might use dual language readings, to study closely the differences e.g. in word order.
It helps you produce a new text which consists of the two files, with sentences interspersed. That way you can compare the translation with the original.

Example

Original : *Der Knabe sagte diesen Gedanken dem Schwesterchen, und diese folgte. Allein auch der Weg auf den Hals hinab war nicht zu finden. So klar die Sonne schien, ...(from Stifter's Bergkristall, translated by Harry Steinhauer, in German Stories, Bantam Books 1961)*
Translation: *The boy communicated this thought to his sister and she followed him. But the road down the neck could not be found either. Though the sun shone clearly, ...*

Aligned text:
<G1> Der Knabe sagte diesen Gedanken dem Schwesterchen, und diese folgte.
<E1> The boy communicated this thought to his sister and she followed him.
<G2> Allein auch der Weg auf den Hals hinab war nicht zu finden.
<E2> But the road down the neck could not be found either.
<G3> So klar die Sonne schien, ...
<E3> Though the sun shone clearly, ...

An aligned text like this helps you identify additions and omissions, normalisations, style changes, word order preferences. In this case the translator has chosen to avoid very close equivalence.

See also: an example of aligning 249, Aligning and moving 252

11.4 example of aligning

How to do it -- a Portuguese, Spanish and English example

1. Read in 254 your Portuguese text (eg. **`Hora da Estrela.TXT`**), and checking its sentences and paragraphs break 256 the way you like. Try "Unusual Lines 258" to help identify oddities.
2. Save it

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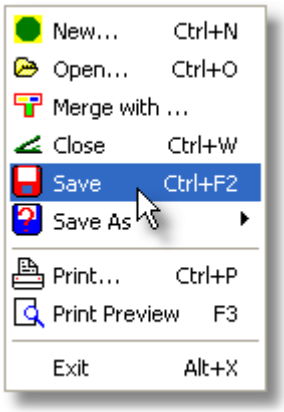
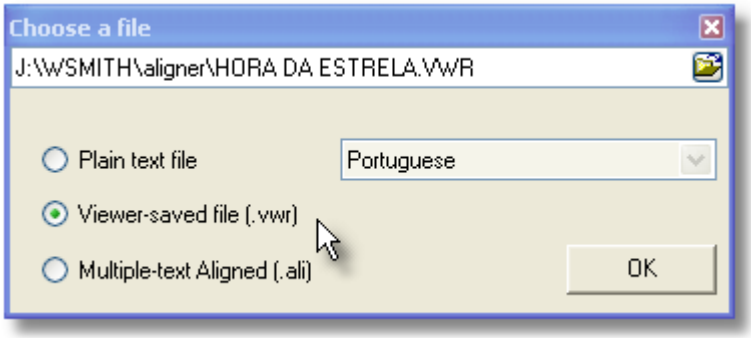
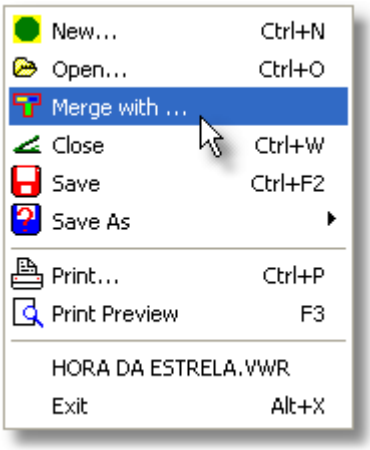


and it will (by default) get your filename **.VWR,** eg. **Hora da Estrela.VWR.**

3. Do the same steps 1 and 2 for your English text -- you will now have e.g. **Hour of the Star.VWR**.
4. Repeat with the Spanish -- **Hora de la Estrella.txt** giving **Hora de la Estrella.VWR.**
5. Now open your Portuguese **Hora da Estrela.VWR**



6. and then *File* | *Merge*



7. Get all three.

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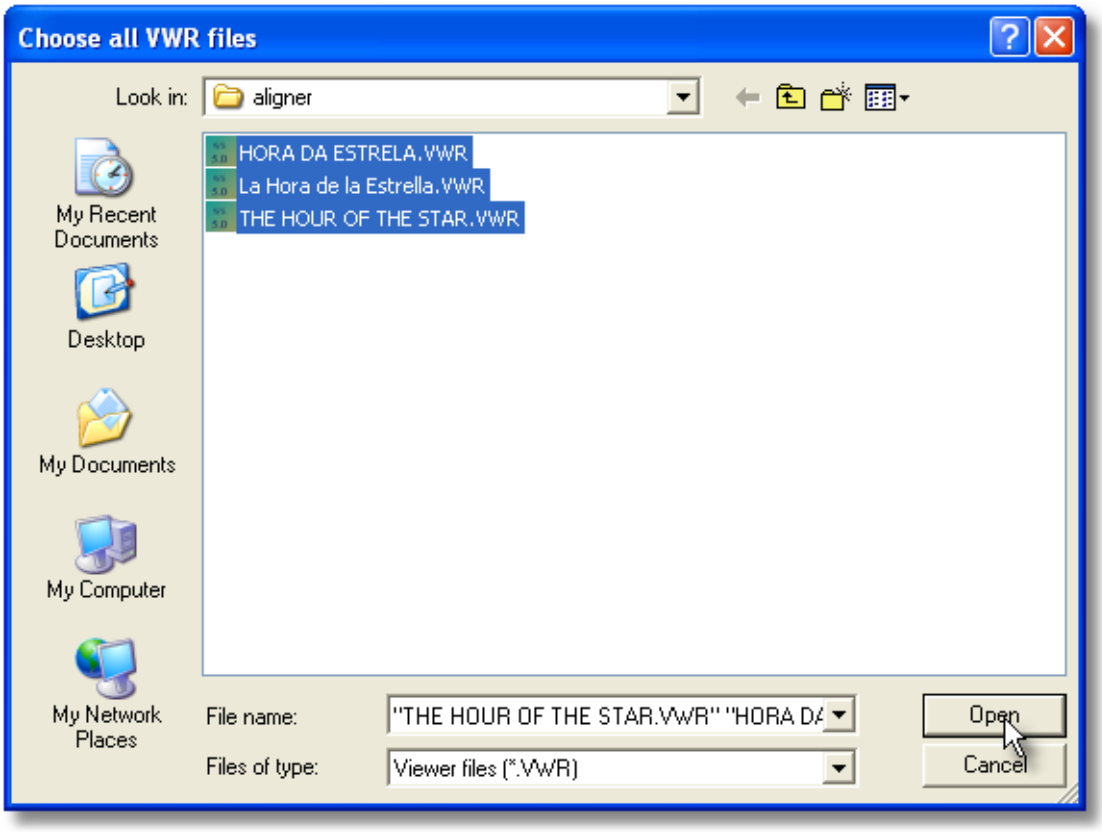
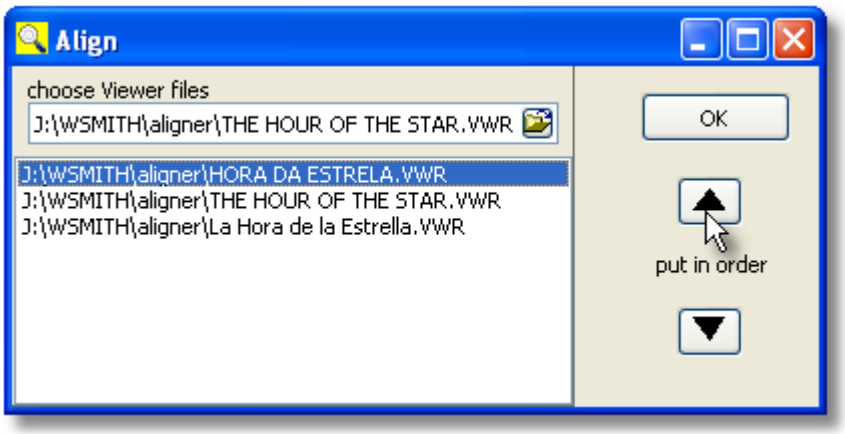


and put them in your preferred order



(Here the Portuguese comes first because it was the original source text.)

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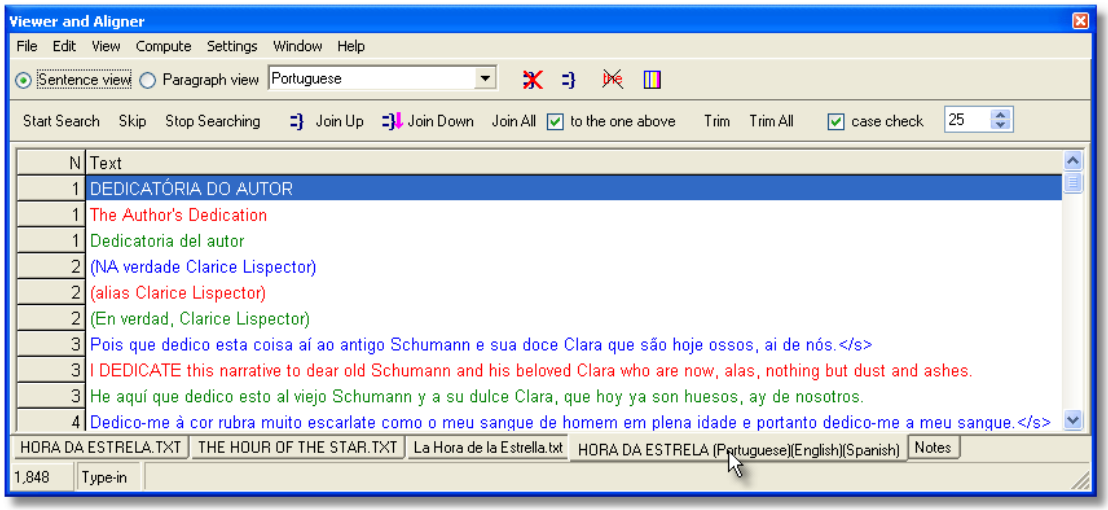

8. Finally *File* | *Save AS* - **`Portuguese, English, Spanish.ALI`** (multiple-language aligned file). Note that there are 4 tabs to the screen; you can choose all three versions aligned (**`.ALI`**), or each separate **`.VWR`** file.

11.5 aligning and moving

You may well want to alter sentence ordering. The translator may have used three sentences where the original had only one. You can also merge paragraphs.

adjusting by dragging with the mouse

To merge sentences or paragraphs, simply grab and drag it up to the next one above in the same language. Or use the Join button. Or press F4.
To split a sentence or paragraph, choose the Split button or press Ctrl/F4.

Finally you will want to save (F2) the results 66.

See also: Viewer & Aligner contents 248

11.6 editing

While Viewer & Aligner is not a full word-processor, some editing facilities have been built in to help deal with common formatting problems:

- Edit (): opens up a window allowing you to edit the whole of the current sentence or paragraph.
- Trim extra spaces: this goes through each sentence of the text, removing any redundant spaces -- where there are two or more consecutive spaces they will be reduced to one.
- Find lower-case lines 258: this identifies cases where a sentence or paragraph does not start with a capital letter or number -- you will probably want to join 256 it to the one above. This problem is common if the text has been saved as "text only with line breaks" (where an <Enter> comes at the end of each line whether or not it is the end of a paragraph.)
- Find short lines 258

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You will then want to save (F2) your text.

You can also:

- open a new file for viewing (you can open any number of text files within Viewer & Aligner)
- copy a text file to the clipboard 265 (select, then press Control+Ins)
- print the whole or part of the currently active text file
- search for words or phrases (press F12)

11.7 languages

Each Viewer file (**.VWR**) has its own language. Each Aligner file (**.ALI**) has one language for each of the component sections. (They could all be the same, if for example you were analysing various different editions of a Shakespeare play they'd all be English.) The set of languages available is that defined using the Languages Chooser 204.

If you find you have read in a plain text without defining the language correctly, you can change the language to one of your previously defined languages 205 by pressing the button visible at the top of Viewer & Aligner.

11.8 numbering sentences & paragraphs

You can use the **Viewer & Aligner** to make a copy of your text with all the sentences and/or paragraphs tagged with **<S> and <P>**.
To do this, simply read in the text file in, choose *Edit* | *Insert Tags*, then save it as a text file 61.

See also: Viewer & Aligner contents 248

11.9 options

Mode: Sentence/Paragraph

This switches between Sentence mode and Paragraph mode. In other words you can choose to view your text files with each row of the display taking up a sentence or a paragraph.

Likewise, you can make an dual aligned text by interspersing either paragraphs or sentences. The other functions (e.g. joining, splitting 256) work in the same way in either mode.

Colours

The various texts in your aligned text will have different colours associated with them. Colours can be changed using the button.

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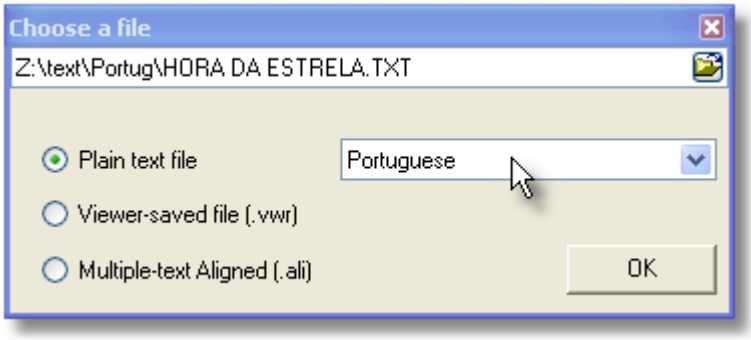
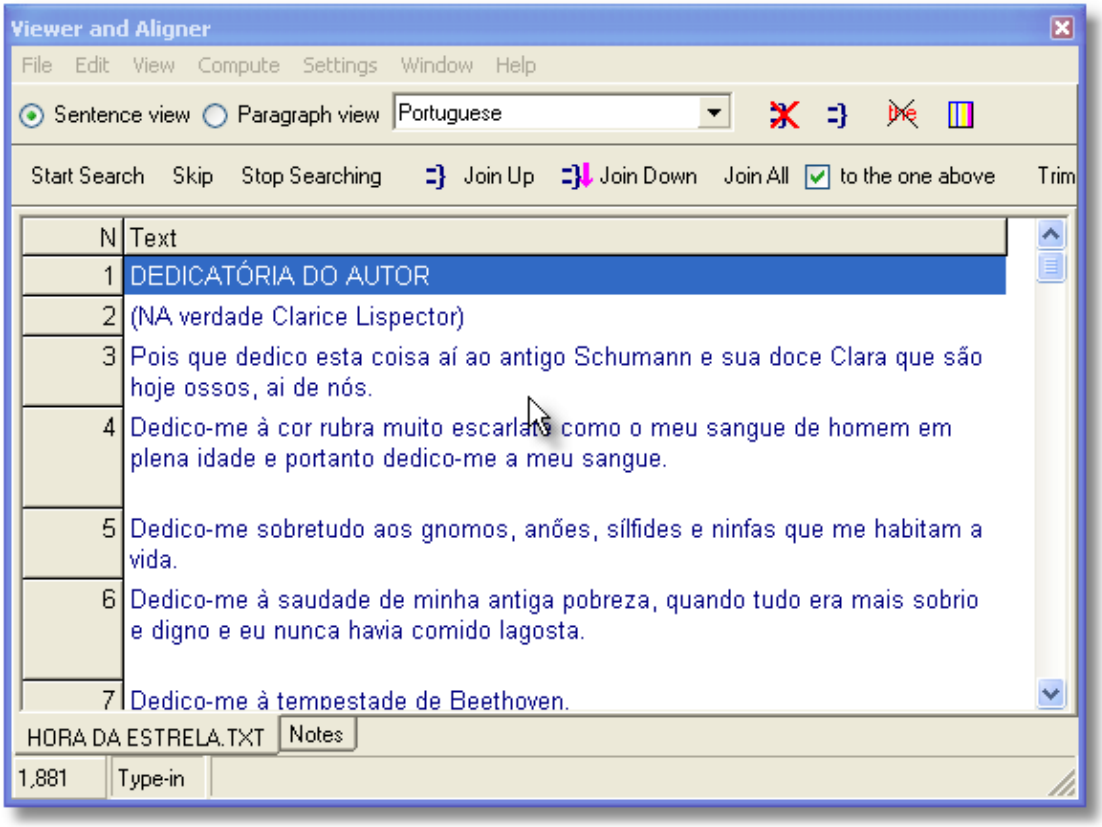
11.10 reading in a plain text

In Viewer and Aligner, choose *File* | *Open,* choose the language 72 and select your plain text file.



and you may see this sort of thing in *Sentence view*,



or in *Paragraph view*,

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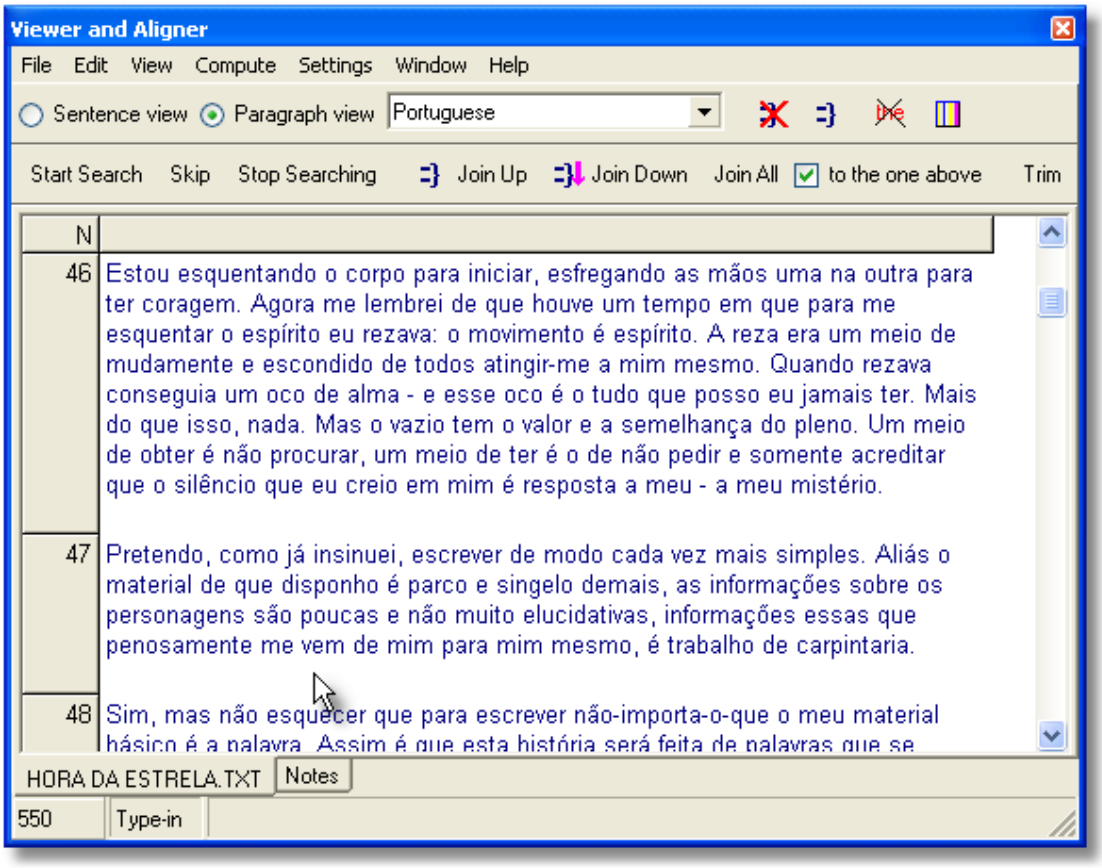
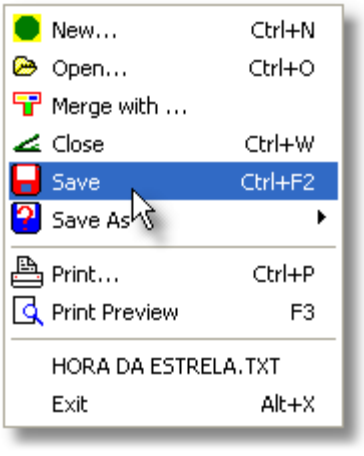


Edit it, as necessary, e.g. splitting or merging 256 paragraphs or sentences.
Save it as a **.VWR** file:



.

See also: example of aligning 249

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11.11 sentence joining and splitting

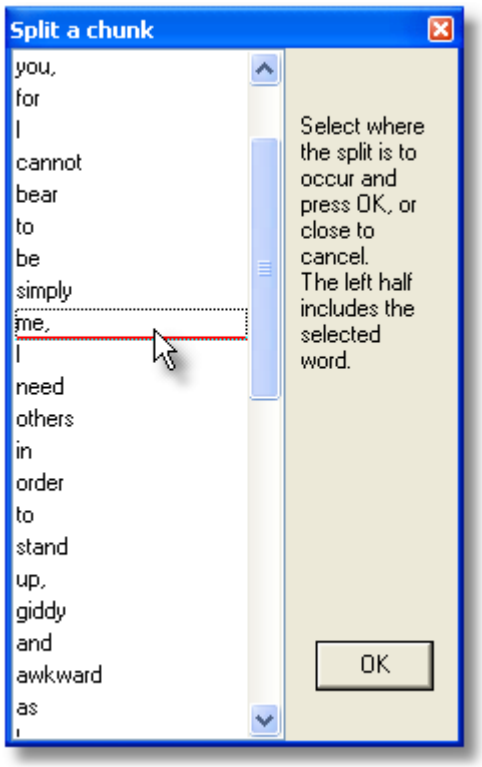
Joining

The easiest way to join two sentences is simply to drag the one you want to move onto its neighbour above. Or select the lower of the two and press F4 or use the button ( )

Splitting in two

To split a sentence, press . You will get a list of the words. Click on the word which should end the sentence, then press OK.

example



This will insert the words which follow (**`I need others`** etc.) into a new line below.

See also: Viewer & Aligner contents 248

11.12 settings

1. What constitutes a "short" sentence or paragraph (default: less than 25 characters)
2. Whether you want to do a lower-case check when Finding Unusual Lines

The settings are standard ones found in most of the Tools:

Colours 36
Font 51
Printing 52
Text Characteristics 72

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Review all Settings 65

11.13 technical aspects

When is a sentence not a sentence?

There is no perfect mechanical way of determining sentence-breaks. For example, a heading may well have no final full stop but would normally not be considered part of the sentence which follows it. And a sentence may often have no final full stop, if what follows it is a list of items.

The algorithm used by **Viewer & Aligner** is: a sentence ends if a full-stop, question-mark or exclamation-mark (.?!) is immediately followed by one or more word separators 269 and if the next non-punctuation symbol is a capital letter A..Z or an accented capital letter, a number or a currency symbol. The same routine is used as in **WordList**.

Consider this chunk from *A Tale of Two Cities*:

"Wo-ho!" said the coachman. "So, then! One more pull and you're at the top and be damned to you, for I have had trouble enough to get you to it! - Joe!"

Viewer & Aligner will mistakenly consider - **`Joe!`** as a separate sentence, but handles **`"Wo-ho!" said the coachman.`** as one: though the program would split it in two if the word after **`ho!`** had a capital lettter (e.g. in **`Wild Bill, the coachman, said.`**)

Viewer & Aligner cannot therefore be expected to handle all sentence boundaries exactly as *you* would. (**I saw Mr. Smith.** would be considered two sentences; several headings may be bundled together as one sentence.) For this reason you can choose *Find Short Sentences* to seek out 258 any odd one-word sentences.

See also: Viewer & Aligner contents 248

11.14 translation mis-matches

Viewer & Aligner can help find cases where alignment has slipped (one sentence having been translated as two or three). One method is to use the menu item *Match by Capitals*. This searches for matching proper nouns in the two versions: if say **`Paris`** is mentioned in sentences 25 of the source text and not in sentence 25 of the translation but in sentence 27, it is very likely that some slippage has occurred.

Viewer & Aligner will search forwards from the current text sentence on, and will tell you where there's a mis-match. You should then search back from that point to find where the sentences start to diverge. It may be useful to sample every 10 or every 20 to speed up the search for slippage.

When you find the problem, un-join 256 or join 256 and/or edit the text as appropriate, then save it.

See also: The technical side... 257, Finding unusual sentences 258, Viewer & Aligner contents 248

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11.15 troubleshooting

Can't see the whole sentence or paragraph

Press to "auto-size" the lines in your display. This adjusts line heights according to the current highlighted column of data.

Can't see the whole text file

Press to "refresh" the display.

Don't like the colours

Change colours using . The colours initially used for each language version in the dual-language window are the same colours as used for primary sorting and secondary sorting in **Concord**.

See also: Viewer & Aligner contents 248

11.16 unusual sentences

It can be useful to seek unusually short sentences to see whether your originals have been handled as you want. Because Viewer & Aligner uses full stops, question marks and exclamation marks as sentence-boundary indicators, you will find a string like "Hello! Paul! Come here!" is broken into 3 very short sentences. Depending on your purposes you may wish to consider these as one sentence, e.g. if a translator has translated them as one ("Oi, Paulo, venha cá!") .

This function can also find lower-case lines: where a sentence or paragraph does not start with a capital letter or number -- you will probably want to join it to the one above. This problem is common if the text has been saved as "text only with line breaks" (where an <Enter> comes at the end of each line whether or not it is the end of a paragraph.)

Seeking

Use the Find Unusual Toolbar menu item ( ) and then press *Start Search*. Viewer & Aligner will go to the next possibly problematic sentence or paragraph and you will probably want to join 256 it by pressing Join Up (to the one above), Join Down, or Skip.

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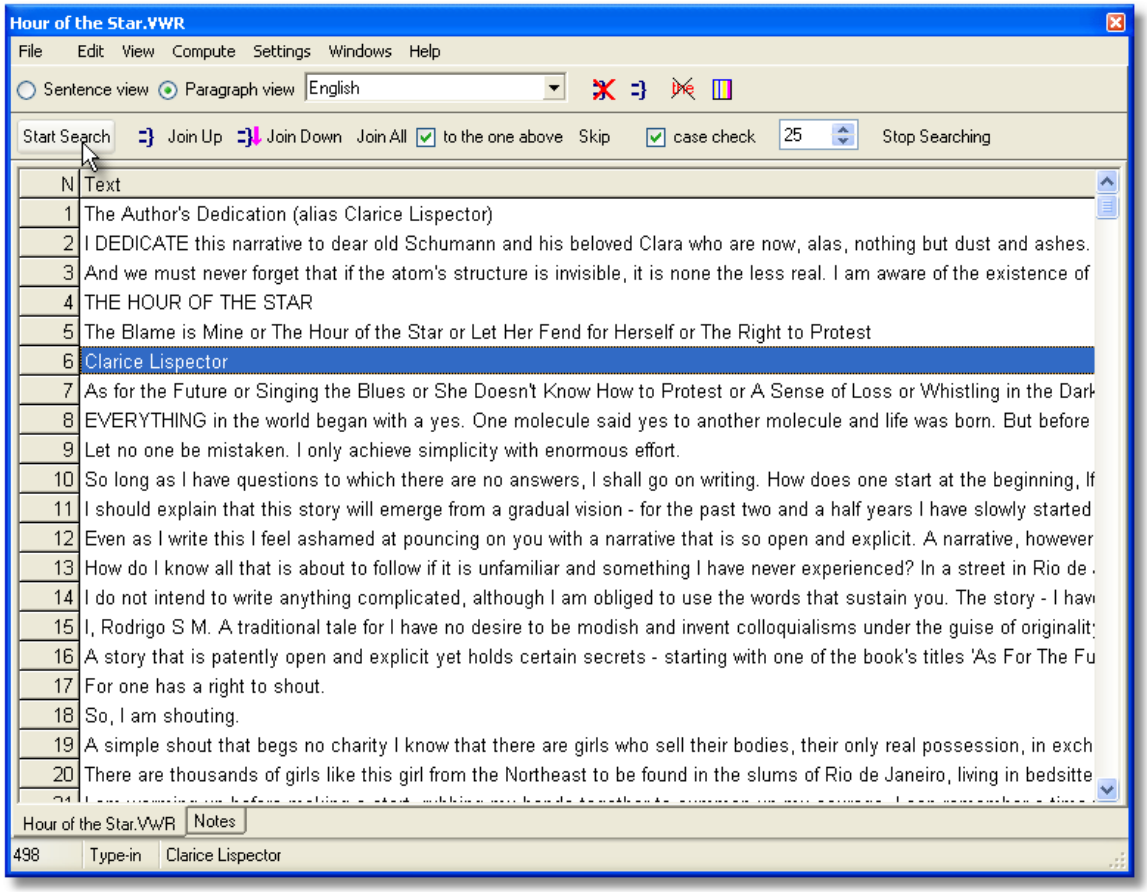

"Case check" switches on or off the search for lower-case sentence starts. The number (25 in the example above) is for you to determine the number of characters counting as a short sentence or paragraph.

See also: Settings 256, The technical side... 257, Finding translation mis-matches 257, Viewer & Aligner contents 248

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Reference

12 Reference

12.1 32-bit version

WordSmith 4 brought in lots of changes "under the hood" after the earlier 16-bit versions of the 1990s. Some of the changes you will see are:

- long filenames 279
- better tag and entity 76 handling including Tag Concordancing 112
- previous work can still be used, but it should be re-saved in the 32-bit format. You will get a suggestion to "Update" a data file if it is still in the old format.
- zip file handling 289
- easier exporting of data to Microsoft Word and Excel 61
- Unicode text handling, allowing more languages 30 to be processed
- possibility of altering the data 42 as it comes in, e.g. for language-specific lemmatisation
- the old limitations of 16,000 lines of data have gone. (The theoretical limit for a list of data is over 134 million lines.)

See also: Contact Addresses 268.

12.2 acknowledgements

WordSmith Tools has developed over a period of years. Originally each tool came about because I wanted a tool for a particular job in my work as an Applied Linguist. Early versions were written for DOS, then Windows™ came onto the scene.

One tool, **Concord**, had a slightly different history. It developed out of *MicroConcord* which Tim Johns and I wrote for DOS and which Oxford University Press published in 1993. **Concord** has a lot of additional features in this Windows version and all the code has been re-written, but the essential features of the design were there in *MicroConcord*.

The first published version was written in Borland™ Pascal with the time-critical sections in Assembler. Subsequently the programs were converted to Delphi™ 16-bit; this is a 32-bit only version written in Delphi 2007 and still using time-critical sections in Assembler.

I am grateful to

- lots of users who have made suggestions and given bug reports,
- generations of students and colleagues at the School of English, University of Liverpool, and the MA Programme in Applied Linguistics at the Catholic University of São Paulo
- Audrey Spina, Élodie Guthmann and Julia Hotter for their help with the French & German versions; Spela Vintar's student for Slovenian; Zhu Yi and others at SFLEP in Shanghai for Mandarin.

for their feedback on aspects of the suite (including bugs!), and suggestions as to features it should have. Researchers from many other countries have also acted as alpha-testers and beta-testers and I thank them for their patience and feedback. I am also grateful to Nell Scott and other members of my family who have always given valuable support, feedback and suggestions.

Mike Scott
Feel free to email me at my contact address 268 with any further ideas for developing **WordSmith Tools**.

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12.3 API

It is possible to run the WordSmith routines from your own programs; for this an API is published at http://www.lexically.net/wordsmith/version5/API/API.htm. If you know a programming language, you can call a **.dll** which comes with WordSmith and ask it to create a concordance, a wordlist or a key words list, which you can then process to suit your own purposes.

See also : custom processing 42

12.4 bibliography

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UCREL's log likelihood information

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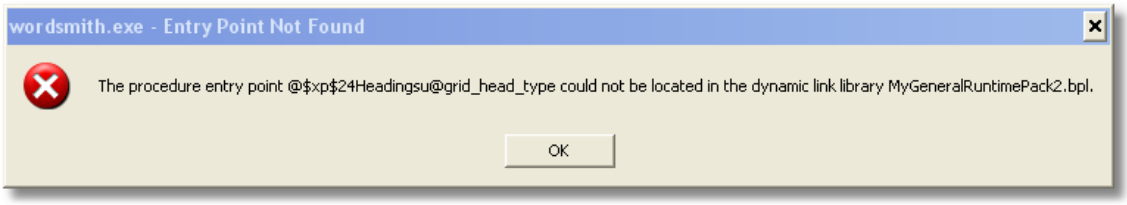
12.5 bugs

All computer programs contain bugs. You may have seen a "General Protection Fault" message when using big expensive drawing or word-processing packages.

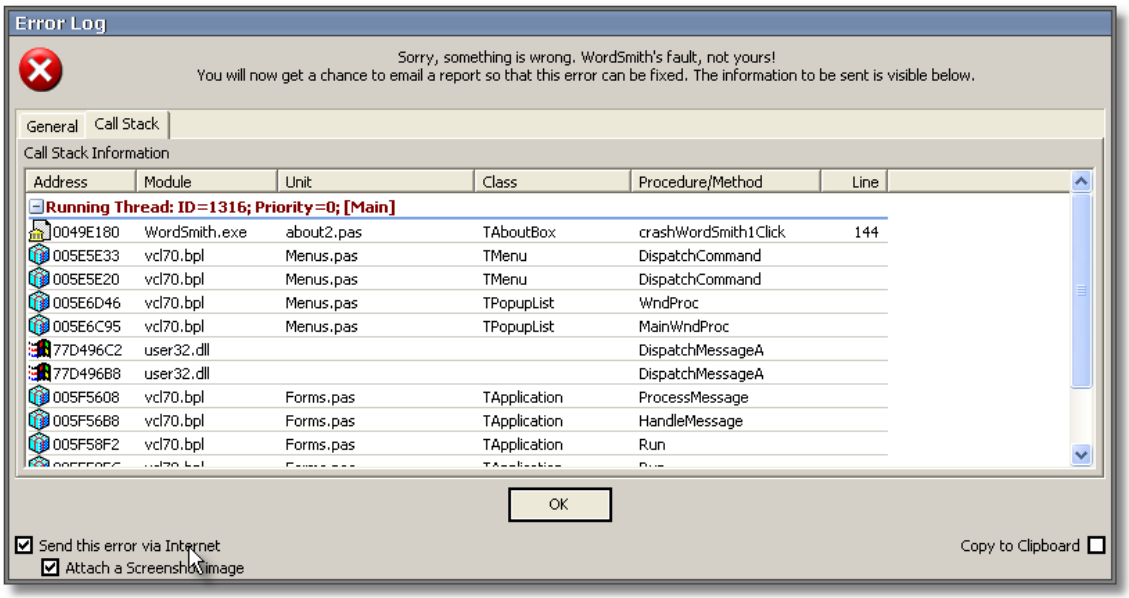
If you see something like this,



then you have an incompatibility between sections of WordSmith. You have probably downloaded a fresh version of some parts of WordSmith but not all, and the various sub-programs are in conflict... The solution is a fresh download. http://www.lexically.net/wordsmith/version5/faqs/updating_or_reinstalling.htm explains.

Otherwise you should get a report popping up, giving "General" information about your PC and "Details" about the fault. This information will help me to fix the problem and will be saved in a small text file called **`wordsmith.elf, concord.elf, wordlist.elf`**, etc. When you quit the program, you will be offered a chance to email this to me.

The first thing you'll see when one of these happens is something like this:



You may have to quit when you have pressed OK, or WordSmith may be able to cope despite the problem.
Usually the offending program will be able to cope despite the bug or you can go straight back into it without even needing to quit the main WordSmith Tools Controller 4, retrieve your saved results 66 from disk, and resume. If that doesn't work, try quitting WordSmith Tools overall, or quit Windows and then start it up again.

When you press OK, your email program should have a message with a couple of attachments to send to me.

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The email message will only get sent when you press Send in your email program. It is only sent to me and I will not pass it on to anyone else. Read it first if you are worried about revealing your innermost secrets ... it will tell me the operating system, the amount of RAM and hard disk space, the version of WordSmith, and some technical details of routines which it was going through when the crash occurred.

error messages 297

These warn you about problems which occur as the program works, e.g. if there's no room left on your disk, or you type in an impossible filename 279 or a number containing a comma.

See also: logging 23, troubleshooting 292.

12.6 Character Sets

12.6.1 overview

You need "plain text" in WordSmith. Not Microsoft Word .doc files -- which contain text and a whole lot of other things too that you cannot normally see.

To handle a text in a computer, programs need to know how the text is encoded. In its processing, the software sees only a long string of numbers, and these have to match up with what you and I can recognise as "characters". For many languages like English with a restricted alphabet, encoding can be managed with only 1 "byte" per character. On the other hand a language like Chinese, which draws upon a very large array of characters, cannot easily be fitted to a 1-byte system. Hence the creation of other "multi-byte" systems. Obviously if a text in English is encoded in a multi-byte way, it will make a bigger file than one encoded with 1 byte per character, and this is wasteful of disk and memory space. So, at the time of writing, 1-byte character sets are still in very widespread use. UTF-8 is a name for a multi-byte method, widely used for Chinese, etc.

In practice, your texts are likely to be encoded in a Windows 1-byte system, older texts in a DOS 1-byte system, and newer ones, especially in Chinese, Japanese, Greek, in Unicode. What matters most to you is what each character looks like, but WordSmith cannot possibly sort words correctly, or even recognise where a word begins and ends, if the encoding is not correct. WordSmith has to know (or try to find out) which system your texts are encoded in. It can perform certain tests in the background. But as it doesn't actually understand the words it sees, it is much safer for you to define the character set in advance 265, especially if you process texts in German, Spanish, Russian, Greek, Polish, Japanese, Farsi, Arabic etc.

Three main kinds of character set, each with its own flavours, are Windows, DOS, and Unicode.

Tip

To check results after changing the code-page, select Choose Texts 31 and View the file in question. While viewing you can change Text Characteristics until it looks right. If you can't get it to look right, you've probably not got a cleaned-up plain text file but one straight from a word-processor. In that case, take it back into the word-processor and save it as text again as a plain text file in Windows format, which is more up-to-date than DOS formats.

See also: Choosing Accents & Symbols 265, Accented characters 264; Choosing Language 30

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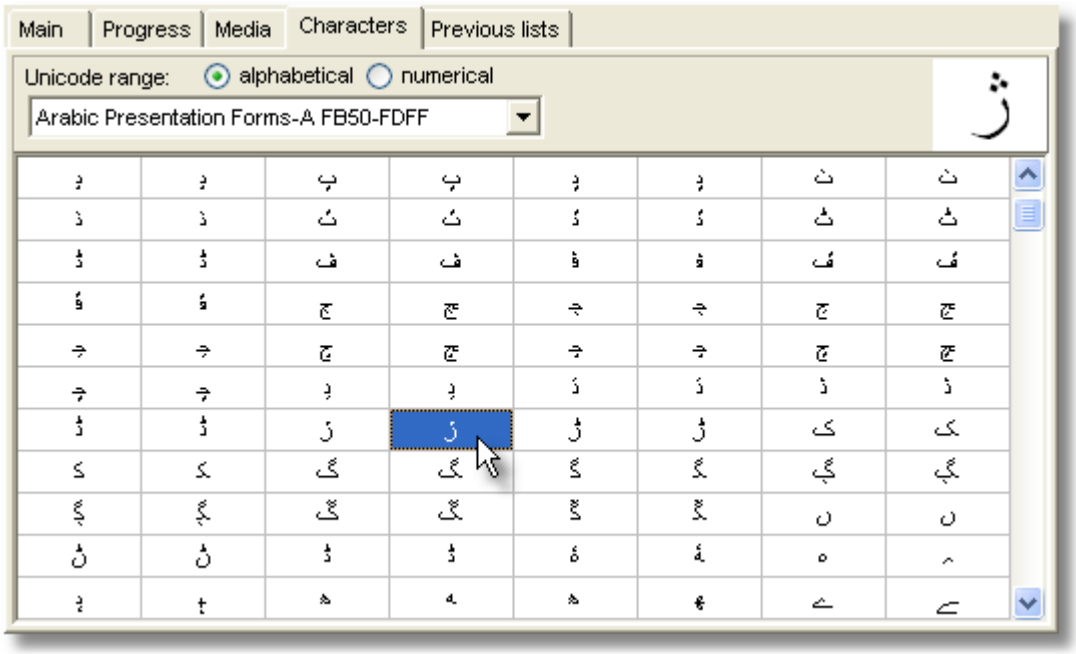
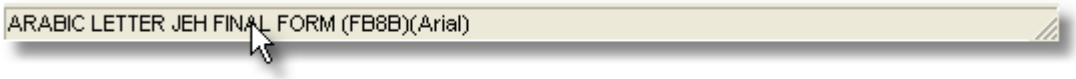
12.6.2 accents & symbols

When entering your search-word 126 you may need to insert symbols and accented characters into your search-word, exclusion word or context word, etc. If you have the right keyboard set for your version of Windows this may be very easy — if not, just choose the symbol in the main Controller 4 by clicking.



Below, you will see which character has been selected



with the current font (which affects which characters can be seen), and then you can paste the character into Concord:

See also: Choosing Language 30

12.7 clipboard

You can block an area of data, by using the cursor arrows and Shift, or the mouse, then press Ctrl/Ins or Ctrl/C to copy it to the clipboard. If you then go to a word processor, you can paste or ("paste special") the blocked area into your text. This is usually easier than saving as a text file 61 (or printing 60 to a file) and can also handle any graphic marks.

Example

1. Select some data. Here I have selected 3 lines of a concordance, just the visible text, no Set or Filenames information.

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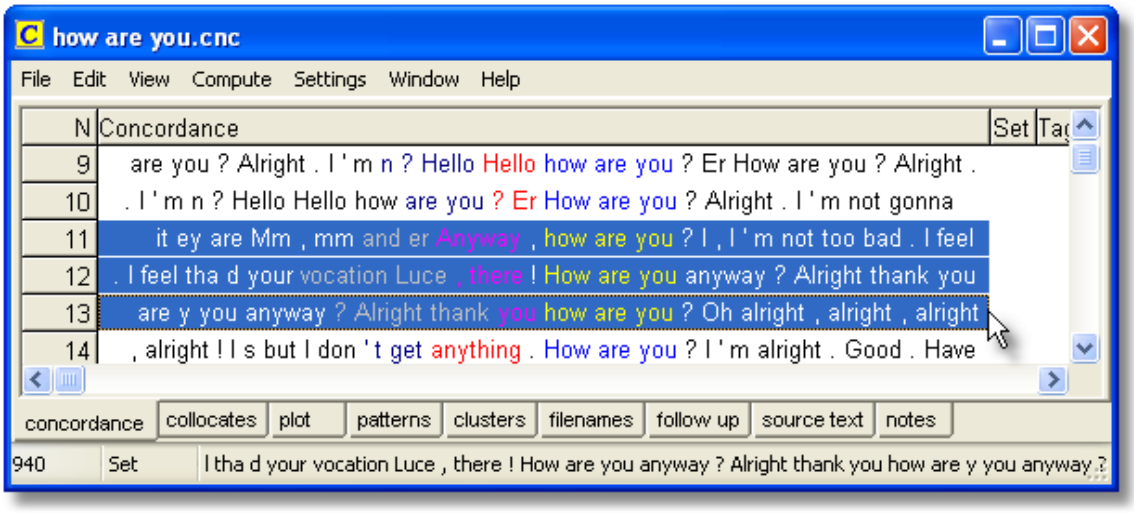
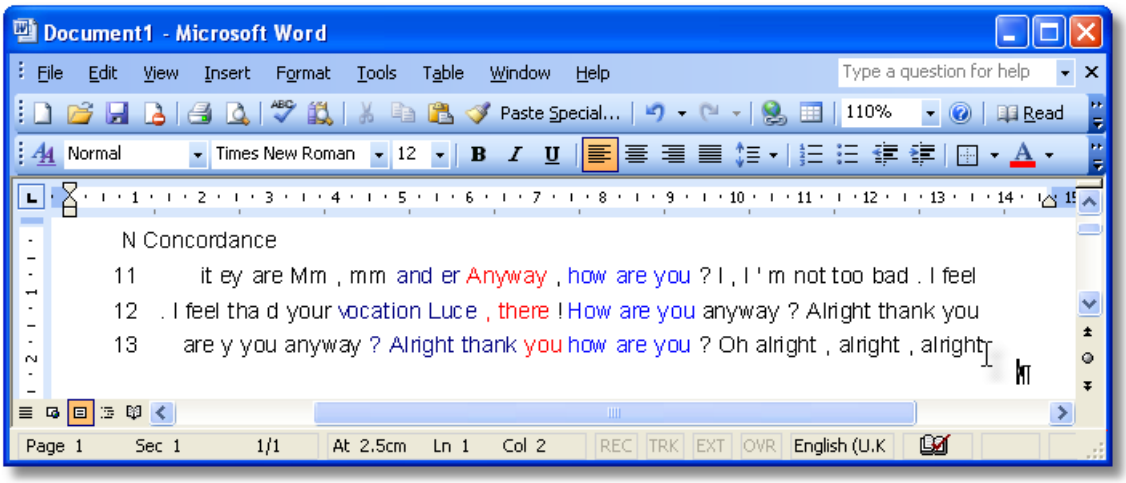
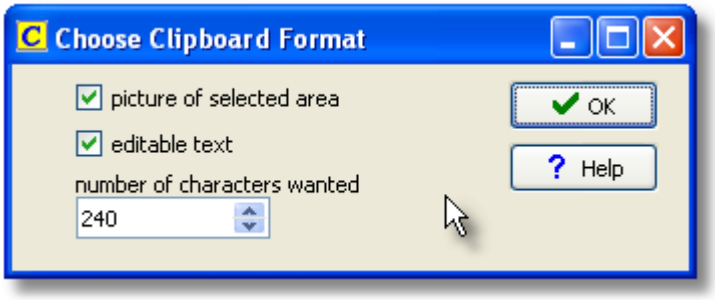


2. Hold down Control and press Ins or C.

In the case of a concordance, since concordance lines are quite complex, you will be asked whether you want a *picture* of the selected screen lines, which looks like this in MS Word:



with the colours and font resembling those in WordSmith, and/or plain text, and if so how many characters:



Once you've pressed OK, the data goes to the Windows "clipboard" ready for pasting into any other application, such as Excel, Word, Notepad, etc.

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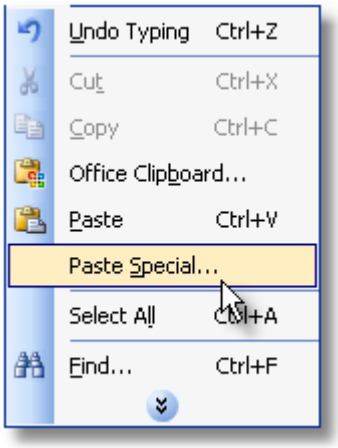
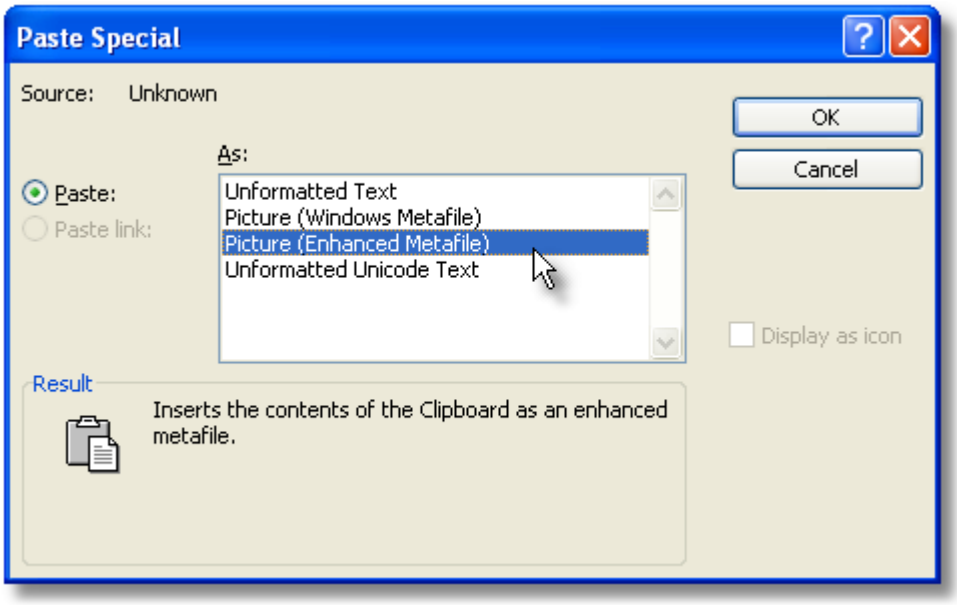
For all other types of lists, such as word-lists, the data are automatically placed in the Clipboard in both formats, as a picture and as text. You can choose either one and they will look quite different from each other!

Choose "Paste Special" in Word or any other application to choose between these formats.



and then, for the picture format



You will probably use this picture format for your dissertation and will have to in the case of plotted data. In this concordance, you get only the words visible in your concordance line (not the whole line).
What you're pasting is a graphic which includes screen colours and graphic data. If you subsequently click on the graphic you will be able to alter the overall size of the graphic and edit each component word or graphic line (but not at all easily!).

as plain text

Alternatively, you might want to paste as plain Unformatted Unicode text because you want to edit the concordance lines, eg. for classroom use, or because you want to put it into a spreadsheet such as MS Excel 61™. Here the concordance or other data are copied as plain

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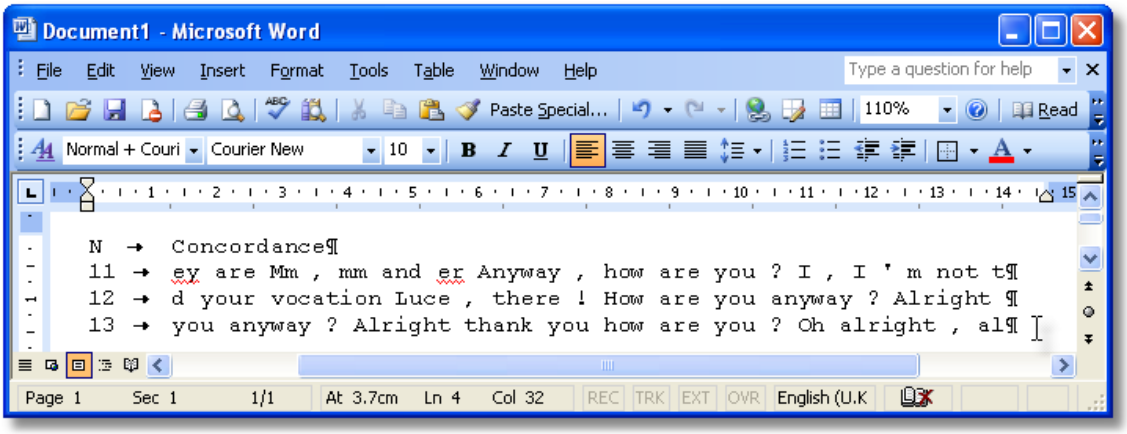
text, with a tab between each column. The Windows plain text editor Notepad can only handle this data format. Microsoft Word will paste (using Shift-Ins or Ctrl-V) the data as text. It pastes in as many characters as you have set in the settings 133 for save as text, the default being 160.

In this case, the concordance lines are copied, but of course they don't line up very nicely and it's hard to see the search-word. For the search-word to line up nicely, you should use a non proportional font, such as Courier or Lucinda Console, and keep the number of characters per line down to some number like 60 or so -- then it'll look like this:



At 10 point text in Lucida Console, the width of the text with 80 characters and the numbers at the left comes to over 18 cm. To avoid word-wrapping, set the page format in Word to landscape, or keep the number of characters per line down to say 50 or 60.

12.8 contact addresses

Downloads

You can get a more recent version at my website. There are also some free extra downloads (programs, word lists, etc.) there too. And links to sources of free text corpora.

Screenshots

visit http://www.lexically.net/wordsmith/version5/screenshots/index.html for screenshots of what WordSmith Tools can do. This may give you useful ideas for your own research and will give you a better idea of the limitations of WordSmith too!

Purchase

Visit http://www.lexically.net/wordsmith/purchasing.htm for details of suppliers.

Complaints & Suggestions

Best of all, join Google Groups WordSmith Tools group and post your idea there so others can see the discussion. Or email me (mike (at) lexically.net). Please give me as full a description of the problem you need to tackle as you can, and details of the equipment too. Please don't include any attachments over 200K in size. I do try to help but cannot promise to…

12.9 date format

Date Format

Japanese date format year_month_day_hour_minute. At least it is logical, going from larger to smaller. Why aren't URLs organised in a logical order too?

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12.10 Definitions

12.10.1 definitions

words

The word is defined as a *sequence of valid characters with a* word separator 269 *at each end*. Valid characters include all the letters from A to Z, plus all accented characters which can be used in the current character set 264, plus any user-defined acceptable characters to be included within a word (such as the apostrophe or hyphen 275).
A word can be of any length but for one to be stored in a word list, you may set the length you prefer (maximum of 50 characters) -- any which exceed your limit will get **+** tagged onto them at that point. You can decide whether or not to include words including numbers (e.g. $35.50) in text characteristics 72.

clusters

A cluster is a *group of words which follow each other in a text*. The term *phrase* is not used here because it has technical senses in linguistics which would imply a grammatical relation between the words in it. In WordList cluster processing 170 or Concord cluster processing 101 there can be no certainty of this, though clusters often do match phrases or idioms. See also: general cluster information 285.

sentences

The sentence is defined as *the full-stop, question-mark or exclamation-mark (.?!) immediately followed by one or more* word separators 269 *and then a capital letter in the current language, a number or a currency symbol*. (For more discussion see Starts and Ends of Text Segments 86 or Viewer & Aligner technical information 257.)

paragraphs

Paragraphs are user-defined. See Starts and Ends of Text Segments 86 for further details.

headings

Headings are also user-defined -- see Starts and Ends of Text Segments 86.

texts

A text in WordSmith means what most non-linguists would call a text. In a newspaper, for example, there might be 6 or 7 "texts" on
each page. This also means that a text = a file on disk. If it doesn't you're better off totally ignoring the "Texts" column in WS1-WS5 output.

See also: Setting Text Characteristics 72, Key-ness 145, Key key-word 145, Associate 139

12.10.2 word separators

Conventionally one assumes that one word is distinguished from the next by the presence of spaces at either end. But **WordSmith Tools** also includes within word separators certain standard codes used by most word processors: page eject code (12), tabs (9), carriage return (13) and line feed (10), end-of-text (26). Besides, hyphens 275 may optionally be considered to split words like *self-access* into two words.
Note that in Chinese and Japanese which do not separate words in this way, any WordSmith

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functions which require word-separation will not work unless you get your texts previously tagged with word-separators.

12.11 demonstration version

The demonstration version of **WordSmith Tools** offers *all* the facilities of the complete suite, except that any screen which shows a list (of words in a wordlist, or concordance lines, etc.) is limited to a small number of lines which can be shown or printed. (If you save data, all of it will be saved; it's just that you can't see it all in the demo version.)

See also: Installing 17, Version Information 288, Contact Addresses 268.

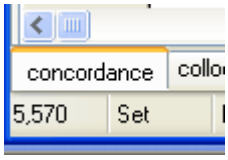
12.12 edit v. type-in mode

Most windows allow you to press keys either

- to edit your data (edit mode), or
- to get quickly to a place in a list (type-in mode).

Concordance windows use key presses also for setting categories 95 for the data, or for blanking 94 out the search word.

In type-in mode, your key-presses are supposed to help you get quickly 68 to the list item you're interested in, e.g by typing `theocr` to get to (or near to) `theocracy` in a word list. If you've typed in 5 letters and a match is found, the search stops.

Changing mode is done by right-clicking on the word *Set* 

and choosing from the

menu which opens up.

See also: user-defined categories 95.

12.13 file types

The standard file-extensions used in WordSmith are

.cnc	concordance file
.lst	word list
.mut	mutual information list
.dcl	detailed consistency list
.tokens, .types	word list index file
.kws	key words file
.kdb	key word database file

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.ali	aligner list
.vwr	viewer list

WordSmith does not affect your Windows Registry, unlike most other programs. The reason is because this can make a system slow down and become unstable, and it also means that to remove WordSmith you can simply delete the folder it is in.

In the Controller's General settings, or on installing, however, you can *if you wish* associate (or disassociate) the current file-types with WordSmith in the Registry. The advantage of association is that Windows will know what Tool to open your data files with.

12.14 finding source texts

For some calculations the original source texts need to be available. For example, for Concord to show you more context 110 than has been saved for each line, it'll need to re-read the source text. For KeyWords to calculate a dispersion plot 148, it needs to look at the source text to find out which KWs came near each other and compute positions of each KW in the text and KW links 147.

If you have moved or deleted the source file(s) in the meantime, this won't be possible.

See also : Editing filenames 47, Choosing source files 31.

12.15 folders\directories

Found in main Settings menu in all Tools. Default folders can be altered in WordSmith Tools or set as defaults 65 in **wordsmith.ini**.

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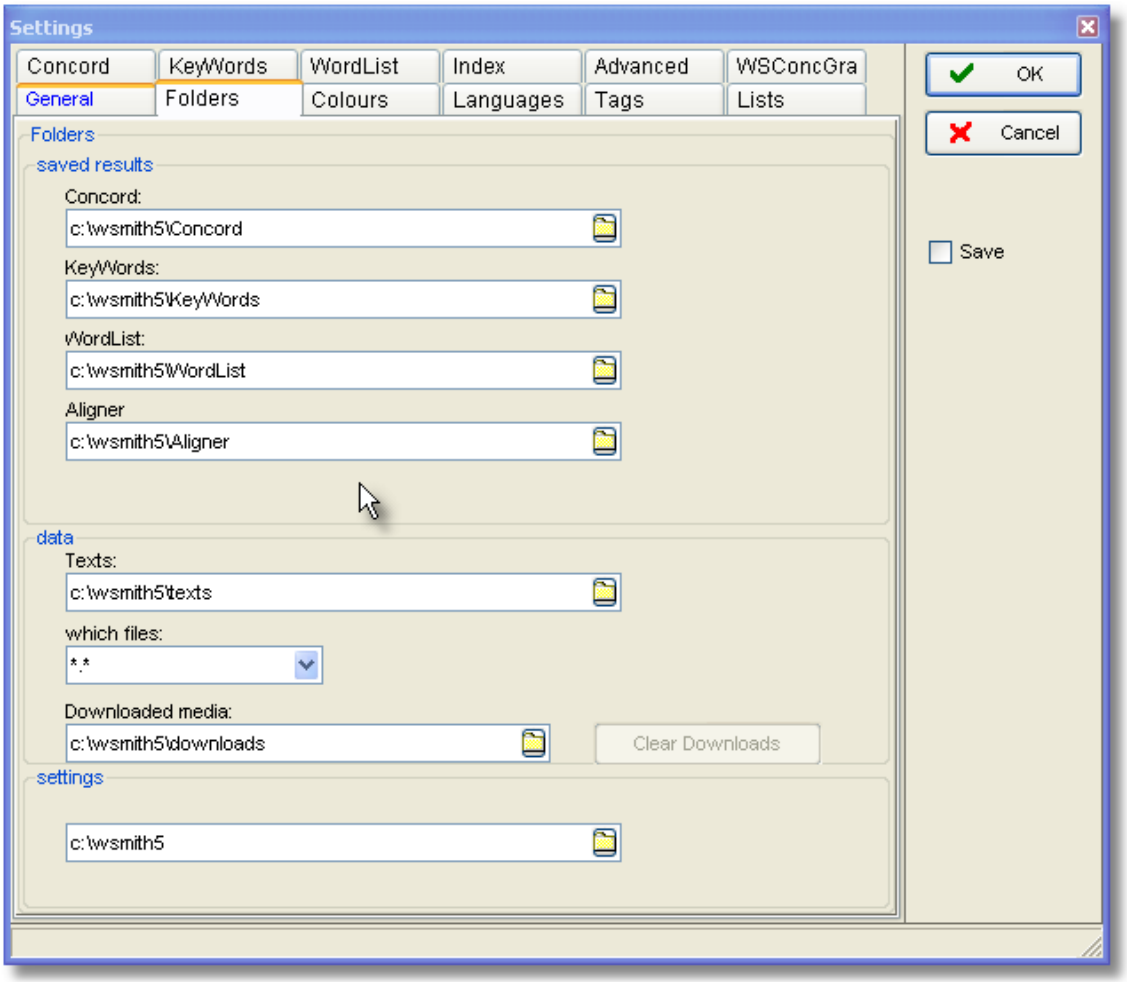

- Concordance Folder: for your concordance files.
- KeyWords Folder: for your key-word list files.
- WordList Folder: where you will usually save 66 your word-list files.
- Aligner: for your dual-text aligned work 249
- Texts Folder: where your text files are to be found.
- Downloaded Media: where your sound & video files 109 will be stored after downloading the first time from the Internet.
- Settings: where your settings files (.ini files and some others) are kept.

If you write the name of a folder which doesn't exist, WordSmith Tools will create it for you if possible. (On a network, this will depend on whether you have rights to create folders and save 66 files.)

If you change your Settings folder, you should let WordSmith copy any **`.ini`** and other settings files which have been created so that it can keep track of your language preferences, etc.

Note: in a network, drive letters such as **`G:, H:, K:`** change according to which machine you're running from, so that what is **G:\texts\my text.txt** on one terminal may be **H:\texts\my text.txt** on another. Fortunately network drives also have names structured like this: \\computer_name\drive_name\. You will find that these names can be used by **WordSmith**, with the advantage that the same text files can be accessed again later.
If you run WordSmith from an external hard drive or a flash drive 17, where again the drive letter

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may change, you will find WordSmith arranges that if your folders are on that same drive they will change drive letter automatically once you have saved your defaults 65.

Tip

Use different folders for the different functions in WordSmith Tools. In particular, you may end up making a lot of word lists and key word lists if you're interested in making databases 146 of key words. It is theoretically possible to put any number of files into a folder, but accessing them seems to slow down after there are more than about 500 in a folder. Use the batch facility to produce very large numbers of word list or key words files. I would recommend using a **\keywords** folder to store **.kdb** files, and **\keywords\genre1, \keywords\genre2,** etc. for the **.kws** files for each genre.

See also: finding source texts 271.

12.16 formulae

For computing collocation strength, we can use

- the joint frequency of two words: how often they co-occur, which assumes we have an idea of how far away counts as "neighbours". (If you live in London, does a person in Liverpool count as a neighbour? From the perspective of Tokyo, maybe they do. If not, is a person in Oxford? Heathrow?)
- the frequency word 1 altogether in the corpus
- the frequency of word 2 altogether in the corpus
- the span or horizons 96 we consider for being neighbours
- the total number of running words in our corpus: total tokens

Mutual Information

Log to base 2 of (A divided by (B times C))
where

A = joint frequency divided by total tokens
B = frequency of word 1 divided by total tokens
C = frequency of word 2 divided by total tokens

MI3

Log to base 2 of ((J cubed) times E divided by B)
where

J = joint frequency
F1 = frequency of word 1
F2 = frequency of word 2
E = J + (total tokens-F1) + (total tokens-F2) + (total tokens-F1-F2)
B = (J + (total tokens-F1)) times (J + (total tokens-F2))

Z Score

(J - E) divided by the square root of (E times (1-P))

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where

J = joint frequency
S = collocational span
F1 = frequency of word 1
F2 = frequency of word 2
P = F2 divided by (total tokens - F1)
E = P times F1 times S

Log Likelihood

based on Oakes 262 p. 170-2.

2 times (

a Ln a + b Ln b + c Ln c + d Ln d
- (a+b) Ln (a+b)
- (a+c) Ln (a+c)
- (b+d) Ln (b+d)
- (c+d) Ln (c+d)
+ (a+b+c+d) Ln (a+b+c+d)
)

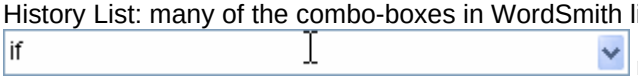
where

a = joint frequency
b = frequency of word 1
c = frequency of word 2
d := frequency of pairs involving neither w1 nor w2
and "Ln" means Natural Logarithm

See also: this link from Lancaster University, Mutual Information 178

12.17 HistoryList

History List: many of the combo-boxes in WordSmith like this one for choosing a search-word



remember what you type in so you can look them up by pressing the down arrow at the right.

12.18 HTML, SGML and XML

These are formats for text exchange. The most well known is HTML, Hypertext Markup Language, used for distributing texts via the Internet. SGML is Standard Generalized Markup Language, used by publishers and the BNC; XML is Extensible Markup Language, intermediate between the other two.

All these standards use plain text with additional extra tags, mostly angle-bracketed, such as <h1> and </h1>. The point of inserting these tags is to add extra sorts of information to the text:

1 a header (**<head>**) supplying details of the authorship & edition
2 how it should display (e.g. **<bold>, <italics>**)
3 what the important sections are (**<h1>** marks a heading, **<body>** is the body of the text)
4 how special symbols should display (&eacute corresponds to é)

See also: Overview of Tags 76

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12.19 hyphens

The character used to separate words. The item "self-help" can be considered as 2 words or 1 word, depending on Language Settings 72.

12.20 international versions

WordSmith can operate with a series of interfaces depending on the language chosen.

If you choose French this is what you see in all of WordSmith.

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See also: acknowledgements 261

12.21 limitations

The programs in **WordSmith Tools** can handle virtually unlimited amounts of text. They can read text from CD-ROMs, so giving access to corpora containing many millions of words. In practice, the limits are reached by a) storage 283 and b) patience.
You can have as many copies of each Tool running at any one time as you like. Each one allows you to work on one set of data.
Tags to ignore 76 or ones containing an asterisk can span up to 1,000 characters.
When searching for tags to determine whether your text files meet certain requirements 79, only the first 2 megabytes of text are examined. For Ascii that's 2 million characters, for Unicode 1 million.

Tip

Press F9 to see the "About" box -- it shows the version date and how much memory 283 you have available. If you have too little memory left, try a) closing down some applications, b) closing WordSmithTools and re-entering.

See also: Specific Limitations of each Tool 276

12.22 tool-specific limitations

Concord limitations

You can compute a virtually unlimited number of lines of concordance using **Concord**.
Concord allows 80 characters for your search-word or phrase 129, though you can specify an unlimited number of concordance search-words in a search-word file 131.

Each concordance can store an unlimited number of collocates with a maximum horizon 96 of 25 words to left and right of your search-word.

WordList limitations

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A head entry can hold thousands of lemmas 165, but you can only join up to 20 items in one go using F4. Repeat as needed.
Detailed Consistency 162 lists can handle up to 50 files.

KeyWords limitations

One key-word plot per key-word display. (If you want more, call up the same file in a new display window.)
number of link 147-windows per key-word plot 148 display: 20.
number of windows of associates 139 per key key-word display: 20.

Splitter limitations

Each line of a large text file can be up to 10,000 characters in length. That is, there must be an <Enter> from time to time!

Text Converter limitations

There can be up to 500 strings to search-and-replace for each.
Each search-string and each replace-string can be up to 80 characters long.
An asterisk must not be the first or last character of the search-string.
When the asterisk is used to retain information, the limit is 1,000 characters.

Viewer & Aligner limitations

If you choose the View option when choosing texts, **Viewer & Aligner** will call up the first 10 source text files selected.

When choosing texts or jumping into the middle of a text (e.g. after choosing in Concord), **Viewer & Aligner** will only process 10,000 characters of each file, to speed things up in the case of very large files, but you can get it to "re-read" the file by pressing to refresh the display, after which it will read the whole text.

See also: General Limitations 276

12.23 links between tools

Linkage with Word Processors, Spreadsheets etc.

All the windows showing lists or texts can easily copy selected information to the clipboard 265. (Use Ctrl+Ins or Ctrl/C to insert).

Where you see this symbol, you can send any selected data straight to a new Microsoft Word™ document.
Where you see an URL (such as http://www.lexically.net) you can click to access your browser.

Links between the various Tools

The programs in **WordSmith Tools** are linked to each other via wordsmith.exe 4 (the one which says " WordSmith Tools Controller 4 " in its caption, and is found in the top-left corner of your screen). This handles all the defaults 65, such as colours, folders, fonts, stop lists, etc.

In general, if you press Control-C in **WordList** or **KeyWords** you'll go straight to a concordance,

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computed using the current word and using the current files.
Press Control-W in **Concord** or **KeyWords** to start a wordlist using the current files.

Each Tool will send as much relevant information as possible to the Tool being called. This will include: the current word (the one highlighted in the scrolling window) and the text files where any current information came from.

Example: after computing a word list based on 3 business texts, you discover that the word *hopeful* is more frequent than you had expected. You want to do a concordance on that word, using the same texts. Place the highlight on *hopeful,* hold down Control and press C. Now you can see whether *hopeful* is part of a 3-word cluster 101, or view a dispersion plot.
Example: after computing a key words database 146 using 300 business texts, you discover that the word *bid* seems to be a key key-word, and that it's associated with *company*, *shares* etc. Place the highlight on *bid,* press Control-C and a concordance will be computed using the same 300 texts. Now you can check out the contexts: is *bid* a bid for power, or is it part of a tendering process?
Example: you have a concordance of *green*. Now press Control-W to generate a word list of the same text files. Press Control-K to compare this word list with a reference corpus list to see what the key words are in these text files.

12.24 keyboard shortcuts

scrolling windows:

Control-Home to top of scrollable list
Control-End to last line of list
if it's ordered alphabetically, type-in your search-word 68
and if it scrolls horizontally:
Home to left edge
End to right edge
Control-Right one word to right
Control-Left one word to left

hotkeys:

Ctrl-C call 277 **Concord** from within another Tool
Ctrl-W call 277 **WordList** from within another Tool
Ctrl-Ins copy blocked section to clipboard 265
Shift-cursor keys block a section

F1 help
F2 save results 66
F3 print results
F4 join entries
F5 mark entries for joining
F6 re-sort 186
Ctrl/F6 reverse word sort 186
F7 view source text
F8 seek short sentences (**Viewer**)
F9 About box (shows version-date and

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	memory availability)
F12	search within a list
Ctrl/M	**Merge** 160 2 word lists or KeyWords databases
Alt/H	access to ***H**elp* sub-menus
Alt/W	access to ***S**ettings* sub-menus
Alt/X	access to ***W**indow* sub-menus
Alt/X	e**X**it the Tool
Ctrl/Z	Zap 74 deleted lines

see also: Menu items and Buttons 279

12.25 long file names

This version of **WordSmith** handles long filenames correctly.

12.26 machine requirements

This version of **WordSmith Tools** is designed for machines with:

- at least 512MB of RAM (you might be OK with 256 but probably not on Windows XP or later)
- at least 40MB of hard disk space
- Windows™ 2000, XP, Vista or later, or an emulator of one of these if using an Apple Mac or Unix system.

You will find it runs better on a faster 286 machine, especially if there's plenty of RAM 283.

12.27 manual for WordSmith Tools

This help file exists in the form of a manual, which you get when you install 17. The file (**wordsmith.pdf)**, is in Adobe Acrobat™ format. It has a table of contents and a fairly detailed index (which I used **WordList** and **KeyWords** to help me create). Most people find paper easier to deal with than help files!

You may find it useful to see screenshots of **WordSmith** in action: ideas are listed here 268.

12.28 menu and button options

These functions may or may not be visible in each Tool depending on the capacity of the Tool or the current window of data -- the one whose caption bar is highlighted.

advice

opens a window showing a map of WordSmith Tools, giving a view of where you are now and where you might go next; also offers advice depending on the Tool.

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associates

opens a new window showing Associates 139.

auto-join

joins (lemmatises 165) automatically.

auto-size

re-sizes each line of a display so that each one shows as much data as it should. Most windows have lines of a fixed size but some, e.g. in Viewer, allow you to adjust row heights. This adjusts line heights according to the current highlighted column of data.

clumps

computes clumps 141 in a keywords database

regroup clumps

regroups 150 the clumps

clusters

computes concordance clusters 101.

collocates

shows collocates 100 using concordance data.

compute

calculates a new column of data 39 based on calculator functions and/or existing data.

redo collocates

recalculates collocates, e.g. after you've deleted concordance lines.

column totals

computes totals, min, max, mean, standard deviation for each column 38 of numerical data.

concordance

within KeyWords, WordList, starts Concord and concordances the highlighted word(s) using the original source text(s).

copy

allows you to copy 40 your data to a variety of different places (the printer, a text file 61, the clipboard 265, etc.).

double columns

allows you to double the number of columns, so as to save paper when printing.

edit

allows editing 47 of a list or searches for a word (type-in search 68).

edit or type-in mode

alternates between edit and type-in mode.

filenames

opens a new window showing the filenames 279 from which the current data derived. If necessary you can edit them 69.

find files

finds any text files which contain all the words you've marked.

grow

increases the height of all rows to a fixed size. See shrink ( ) below.

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help (also F1)

opens WordSmith Help (this file) with context-sensitive help.

join

joins one entry to another e.g. sentences in Viewer, words in WordList (lemmatisation 165).

layout

This allows you to alter many settings for the layout 54: the colour of each column, whether to hide a column of data, typefaces and column widths.

links

computes links 147 between words in a key-words plot.

mark

marks an entry for joining 165 or finding files 50.

match lemmas

checks each item in the list against ones from a text file of lemmatised forms and joins 165 any that match.

match list

matches up the entries in the current list against ones in a "match list file" or template 57, marking any found with (~).

relation

computes mutual information 175 or similar scores in a WordList index list 166.

new...

gets you started 2 in the various Tools, e.g. to make a concordance, a word list, or a key words list.

open...

gives you a chance to choose a set of saved results.

patterns

computes collocation patterns 122.

play media

plays a media file 109.

plot

opens a new window showing a Concord dispersion plot 104 or KeyWords plot 148.

print (also F3)

previews your window data for printing; can print to file, which is equivalent to "save as text 61".

refresh

re-reads your text file (in Viewer) or re-draws the screen (in Print Preview).

remove duplicates

removes any duplicate concordance 123 lines.

replace

search & replace, e.g. to replace drive or folder data, when editing file-names 69 where the source texts have been moved.

re-sort

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re-sorts lists (e.g. in frequency as opposed to alphabetical order) in Concord 124, KeyWords 151 or WordList 186.

ruler

shows/hides vertical divisions in any list; text divisions in a KeyWords plot 148. Click ruler in a menu to turn on or off or change the number of ruler divisions for a plot 104.

save (also F2)

saves your data 66 using existing file-name; if it's a new file asks for file-name first.

save as

saves after asking you for a file-name.

save as text

saves as a .txt file: plain text.

search (also F12)

searches 69 within a list.

shrink

reduces the height of all rows to a smaller fixed height. See grow ( ) above.

skim

in Viewer, allows timed skimming through a text.

statistics

opens a new window showing detailed statistics 181.

statusbar

toggles on & off the "status bar" (at the bottom of a window, shows comments and the status of what has been done).

summary statistics

opens a new window showing summary statistics 40, e.g. proportion of lemmas to word-types.

swap columns for rows

swaps the columns and rows. WordList statistics 181 are shown by default with the file data in each column. Click this button to swap the row data with the column data.

toolbar

toggles on & off a toolbar with the same buttons on it as the ones you chose when you customised popup menus 23.

unjoin

unjoins any entries that have been joined, e.g. lemmatised 165 entries.

view source text

shows the source text 248 and highlights any words currently selected in the list.

Microsoft Word™

sends formatted data to Word.

wordlist

within KeyWords, makes a word list 148 using the current data.

zap

zaps 74 any deleted entries.

see also: Keyboard Shortcuts 278, Customising popup menus 23.

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12.29 numbers

Depending on Language and Text Settings 72, you might wish to include or exclude numbers from word lists.

12.30 plot dispersion value

The point of it

A dispersion value is the degree to which a set of values are uniformly spread. Think of rainfall in the UK -- generally fairly uniformly spread throughout the year. Compare with countries which have a rainy season.
In linguistic terms, one might wish to know how the occurrences of a word like *skull* are distributed in Hamlet, and WordSmith has shown this in plot form since version 1. The dispersion value statistic gives mathematical support to this and makes comparisons easier.

How it is calculated

The plot dispersion calculated in KeyWords and Concord dispersion plots uses the first of the 3 formulae supplied in Oakes 262 (1998: 190-191), which he reports as having been evaluated as the most reliable.
Like the ruler 279, it divides the plot into 8 segments for this.
It ranges from 0 to 1, with 0.9 or 1 suggesting very uniform dispersion and 0 or 0.1suggesting "burstiness" (Katz 262, 1996)

See also: KeyWords plot 148, Concord dispersion plot 104.

12.31 RAM availability

The more RAM (chip memory) you have in your computer, the faster it will run and the more it can store. As it is working, each program needs to store results in memory. A word list of over 80,000 entries, representing over 4 million words of text, will take up roughly 3 Megabytes of memory. (In Finnish it would be much more.) When memory is low, Windows will attempt to find room by putting some results in temporary storage on your hard disk. If this happens, you'll probably hear a lot of clicking as it puts data onto the disk and then reads it off again. You will probably hear *some* clicking anyway as most of the programs in **WordSmith Tools** access your original texts from the hard disk, but a constant barrage of *thrashing* shows you've reached your machine's natural limits.

You can find out how much storage you have available even in the middle of a process, by pressing F9 (the About option in the main *Help* menu of each program). The first line states the RAM availability. The other figures supplied concern Windows system resources: they should not be a problem but if they do go below about 20% you should save results 66, exit Windows and re-enter.

Theoretically, word lists and key word lists can contain up to 2,147,483,647 separate entries. Each of these words can have appeared in your texts up to 2,147,483,647 times. (This strange number 2,147,483,647, half of 2 to the power 32, is the largest signed integer which can be stored in 32 bits and is also called 2 Gigabytes.) You are not likely to reach this theoretical limit: for the item *the* to have occurred 2,147,483,647 times in your texts, you would have processed about 30 thousand million words (1 CD-ROM, containing only plain text, can hold about 100 million words so this number represents some 300 CD-ROMs.) You would have run out of RAM long before this.

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If you have 64MB of RAM or more you should be able to have a copy of a wordlist based on millions of words of text, and at the same time have a powerful word-processor and a text file in memory.

See also: speed 286

12.32 reference corpus

Reference Corpus

A corpus of text which you use for comparative purposes. For example, you might want to compare a given piece of text with the British National Corpus, a collection of 100 million words. Useful when computing key words 138.

In the Controller 4 you can set your reference corpus word list 65 for KeyWords and Concord to make use of. (That is, a word list 188 created using the WordList 156 tool.)

12.33 restore last file

By default, the last word list, concordance or key words listing that you saved or retrieved will be automatically restored on entry to **WordSmith Tools**. If the last Tool used is **Concord**, a list of your 10 most recent search-words will be saved too.
This feature can be turned off temporarily via a menu option or permanently in **`wordsmith.ini`** (in your Program Files\wsmith5 folder).

12.34 selecting multiple entries

To select more than one entry in a wordlist, concordance, key word list etc, hold down Control and select the rows you are interested in. To mark entries for joining 165 in lemmatisation, you can choose *Edit* | *Mark* (F5) in the menu.

For example, to do a search from a wordlist of these items, I help down Control and pressed **`FEB, FEBRUARY, FEBUARY`** and **`FEBURARY`**, then chose *Edit* | *Concordance*

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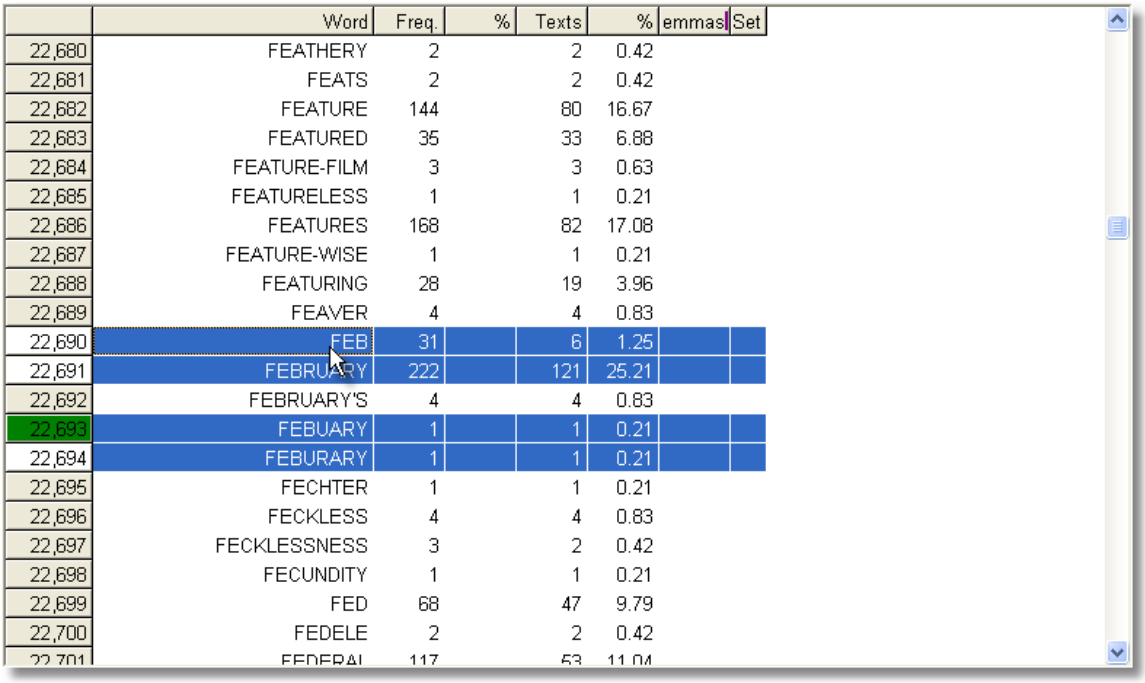
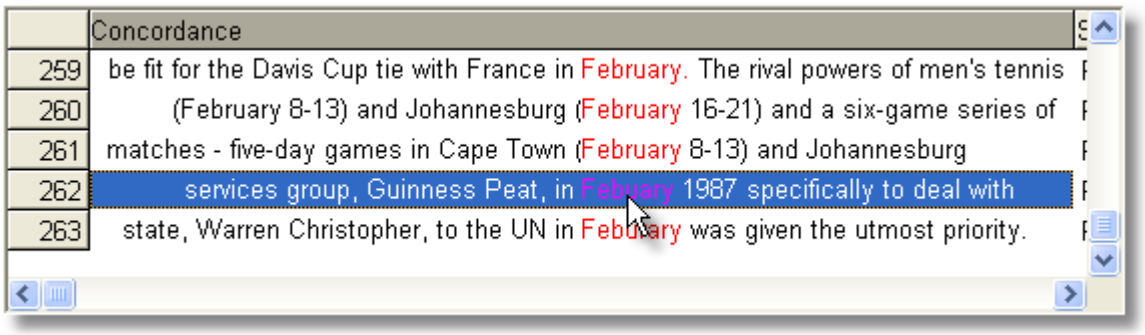


	Word	Freq.	%	Texts	%	emmas	Set
22,680	FEATHERY	2		2	0.42		
22,681	FEATS	2		2	0.42		
22,682	FEATURE	144		80	16.67		
22,683	FEATURED	35		33	6.88		
22,684	FEATURE-FILM	3		3	0.63		
22,685	FEATURELESS	1		1	0.21		
22,686	FEATURES	168		82	17.08		
22,687	FEATURE-WISE	1		1	0.21		
22,688	FEATURING	28		19	3.96		
22,689	FEAVER	4		4	0.83		
22,690	FEB	31		6	1.25		
22,691	FEBRUARY	222		121	25.21		
22,692	FEBRUARY'S	4		4	0.83		
22,693	FEBUARY	1		1	0.21		
22,694	FEBURARY	1		1	0.21		
22,695	FECHTER	1		1	0.21		
22,696	FECKLESS	4		4	0.83		
22,697	FECKLESSNESS	3		2	0.42		
22,698	FECUNDITY	1		1	0.21		
22,699	FED	68		47	9.79		
22,700	FEDELE	2		2	0.42		
22,701	FEDERAL	117		53	11.04		

The resulting concordance shows the last two entries are indeed mis-spellings.



	Concordance
259	be fit for the Davis Cup tie with France in February. The rival powers of men's tennis
260	(February 8-13) and Johannesburg (February 16-21) and a six-game series of
261	matches - five-day games in Cape Town (February 8-13) and Johannesburg
262	services group, Guinness Peat, in Febuary 1987 specifically to deal with
263	state, Warren Christopher, to the UN in Febuary was given the utmost priority.

12.35 single words v. clusters

The point of it…

Clusters are words which are found repeatedly together in each others' company, in sequence. They represent a tighter relationship than collocates, more like multi-word units or groups or phrases. (I call them *clusters* because groups and phrases already have uses in grammar and because simply being found together in software doesn't guarantee they are true multi-word *units*.) Biber 262 calls them "lexical bundles".

Language is phrasal and textual. It is not helpful to see it as a matter of selecting a word to fill a grammatical "slot" as implied by structural theories. Words keep company: the extreme example is idiom where they're bound tightly to each other, but all words have a tendency to cluster together with some others. These clustering relations may involve colligation (e.g. the relationship between **depend** and **on**), collocation 100, and semantic prosody (the tendency for **cause** to come with negative effects such as **accident, trouble,** etc.).

WordSmith Tools gives you two opportunities for identifying word clusters, in WordList 170 and Concord 101. They use different methods. Concord only processes concordance lines, while

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WordList processes whole texts.

How they are computed …

Suppose your text begins like this:

Once upon a time, there was a beautiful princess. She snored. But the prince didn't.

If you've chosen 2-word clusters, the text will be split up as follows:

Once upon
upon a
a time
(note **not** "*time there*" because of the comma)
there was (etc.)
With a three-word cluster setting, it would send
Once upon a
upon a time
there was a
was a beautiful
a beautiful princess
But the prince
the prince didn't
(etc.)

That is, each n-word cluster will be stored, if it reaches n words in length, *up to a punctuation boundary*, marked by **;,.!?** (It seems reasonable to suppose that a cluster does not cross clause boundaries and these punctuation symbols help mark clause boundaries, but there is a Concord setting 126 or a WordList setting 195 for this to give you choice.)

See also: concgrams 234.

12.36 speed

networks

If you're working on a network, WordSmith will be s-l-o-w if it has to read and write results across the network. It's much faster to do your work locally on a **C:** or **D:** drive and then copy any useful results over to network storage later if required.

and generally

To make a wordlist on 4.2 million words used to take about 20 minutes on a 1993 vintage 486-33 with 8Mb of RAM 283. The sorting procedure at the end of the processing took about 30 seconds. A 200Mz Pentium with 64MB of RAM handled over 1.7 million words per minute. On a 100Mz Pentium with 32Mb of RAM this whole process took about 3 and a half minutes, working at over a million words a minute.
When concordancing, tests on the same Pentium 100, using one 55MB text file of 9.3 million words, and a quad-speed CD-ROM drive, showed

search-word	source	speed
quickly	CD-ROM	6 million words per minute
quickly	hard disk	12 million wpm
the	CD-ROM	900,000 wpm
the	hard disk	1 million wpm
thez	CD-ROM	6 million wpm
thez	hard disk	16 million wpm

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Tests using a set of text files ranging from 20K down to 4K, using *quickly* as the search-word, gave speeds of 2 million wpm rising with the longer files to 4 million wpm. Making a word list on the same set of files gave an average speed of 800,000 wpm. On the 55MB text file the speed was around 1.35 million wpm.
These data suggest that factors which slow concordancing down are, in order, word rarity (*the* was much slower than *quickly* or the non-existent *thez*), text file size (very small files of only 500 words or so (3K) will be processed about three times as slowly as big ones) and disk speed (the outdated quad speed CD-ROM being roughly half the speed of the 12ms hard disk). When Concord finds a word it has to store the concordance line and collocates and show it (so that you can decide to suspend 70 any further processing if you don't like the results or have enough already). This is a major factor slowing down the processing. Second, reading a file calls on the computer's file management system, which is quite slow in loading it, in comparison with Concord actually searching through it. Third, disk speeds are quite varied, floppy disks being much the worst for speed.
If processing seems excessively slow, close down as many programs as possible and run WordSmith Tools again. Or install more RAM. Get advice about setting Windows to run efficiently (virtual memory, disk caches, etc.) Use a large fast hard drive.
You can run other software while the programs are computing, but they will take up a lot of the processor's time. Shoot-em-up games may run too jerkily, but printing 60 a document at the same time should be fine.

12.37 status bar

The bar at the bottom of a window, which allows you to pull the whole window bigger or smaller, and which also shows a series of panels with information on the current data. The status bar can usually be revealed or hidden using a main menu option. You can right-click on the panel to bring up a popup menu offering choice between Edit, Type and Set 270.

12.38 tools for pattern-spotting

Tools are needed in almost every human endeavour, from making pottery to predicting the weather. Computer tools are useful because they enable certain actions to be performed easily, and this facility means that it becomes possible to do more complex jobs. It becomes possible to gain insights because when you can try an idea out quickly and easily, you can experiment, and from experimentation comes insight. Also, re-casting a set of data in a new form enables the human being to spot patterns.
This is ironic. The computer is an awful device for recognising patterns. It is good at addition, sorting, etc. It has a memory but it does not know or understand anything, and for a computer to recognise printed characters, never mind reading hand-writing, is a major accomplishment. Nevertheless, the computer is a good device for helping *humans* to spot patterns and trends. That is why it is important to see computer tools such as these in **WordSmith Tools** in their true light. A tool helps you to do your job, it doesn't do your job for you.

Tool versus Product

Some software is designed as a product. A game is self-contained, so is an electronic dictionary. A word-processor, spreadsheet or database, on the other hand, is a tool because it goes beyond its own borders: you use it to achieve something which the manufacturers could not possibly anticipate. **WordSmith Tools**, as the name states, are not products but tools. You can use them to investigate many kinds of pattern in virtually any texts written in a good range of different languages 30.

Insight through Transformation

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No, this is not a religious claim! The claim I am making is psychological. It is through changing the shape of data, reducing it and then re-casting it in a different format, that the human capacity for noticing patterns comes to the fore. The computer cannot "notice" at all (if you input 2 into a calculator and then keep asking it to double it, it will not notice what you're up to and begin to do it automatically!). Human beings are good at noticing, and particularly good at noticing visual patterns.
By transforming a text into a list, or by plotting keywords in terms of where they crop up in their source texts, the human user will tend to see a pattern. Indeed we cannot help it. Sometimes we see patterns where none was intended (e.g. in a cloud). There can be no guarantee that the pattern is "really there": it's all in the mind of the beholder.
WordSmith Tools are intended to help this process of pattern-spotting, which leads to insight. The tools in this kit are intended therefore to help you gain your own insights on your own data from your own texts.

Types of Tool

All tools take up positions on two scales: the scale of specialisation and the scale of permanence.

general-purpose ---------- specialised

general-purpose
The spade is a digging tool which makes cutting and lifting soil easier than it otherwise would be. But it can also be used for shovelling sand or clearing snow. A sewing machine can be used to make curtains or handkerchiefs. A word-processor is general-purpose.
specialised
A thimble is dedicated to the purpose of protecting the fingers when sewing and is rarely used for anything else. An overlock device is dedicated to sewing button-holes and hems: it's better at that job than a sewing machine but its applications are specialised. A spell-checker within a word-processor is fairly specialised.

temporary ---------- permanent

temporary
The branch a gorilla uses to pull down fruit is a temporary tool. After use it reverts to being a spare piece of tree. A plank used as a tool for smoothing concrete is similar. It doesn't get labelled as a tool though it is used as one. This kind of makeshift tool is called "quebra-galho", literally branch-breaker, in Brazilian Portuguese.
permanent
A chisel is manufactured, catalogued and sold as a permanent tool. It has a formal label in our vocabulary. Once bought, it takes up storage room and needs to be kept in good condition.
The **WordSmith Tools** in this kit originated from temporary tools and have become permanent. They are intended to be general-purpose tools: this is the Swiss Army knife for lexis. They won't cut your fingers but you do need to know how to use them.

see also : Acknowledgements 261

12.39 version information

This help file is for the current version of **WordSmith Tools.**

The version of **WordSmith Tools** is displayed in the *About* option (F9) which also shows your registered name and the amount of memory 283 available. If you have a demonstration version this will be stated immediately below your name.

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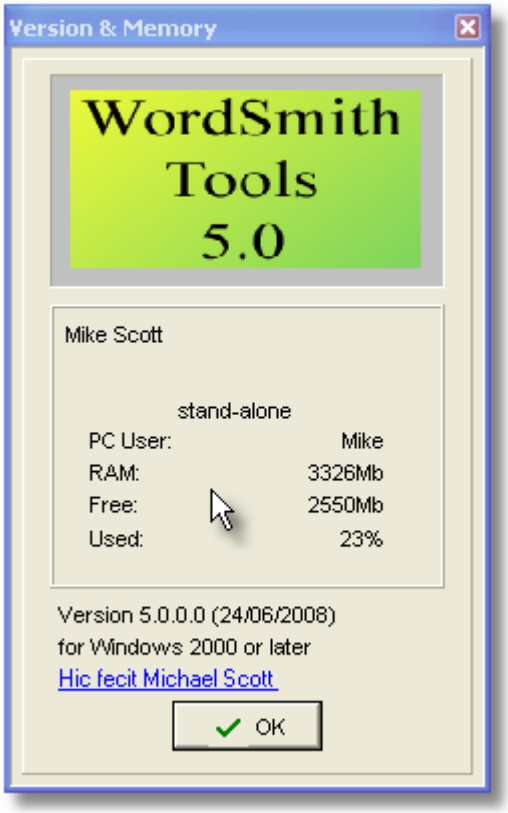
Check the date in this box, which will tell you how up-to-date your current version is. As suggestions are incorporated, improved versions are made available for downloading. Keep a copy of your registration code for updated versions.

You can click on the WordSmith graphic in the About box to see your current code.



See also: 32-bit Version Differences 261, Demonstration Version 270, Contact Addresses 268.

12.40 zip files

Zip files are files which have been compressed in a standard way. **WordSmith** can now read and write to *.zip* files.

The point of it…

Apart from the obvious advantage of your files being considerably smaller than the originals were, the other advantage is that less disk space gets wasted like this: any text file, even a short one containing on the word "hello", will take up on your disk something like 4,000 bytes or maybe up to 32,000 depending on your system. If you have 100 short files, you would be losing many thousands of bytes of space. If you "zip" 100 short files they may fit into just 1 such space. Zip files are used a lot in Internet transmissions because of these advantages. If you have a lot of word lists to store, it will be much more efficient to store them in one .zip file.
The "cost" of zipping is a) the very small amount of time this takes, b) the resulting .zip file can only be read by software which understands the standard format. There are numerous zip programs on the market, including *PKZip*™ and *Winzip*™. If you zip up a word list, these programs can unzip it but won't be able to do anything with the finished list. **WordSmith** can first unzip it and then show it to you.

How to do it…

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Where you see an option to create a zip file, this can be checked, and the results will be stored where you choose but in zipped form with the *.zip* ending.
If you choose to open a zipped word list, concordance, text file, etc. and it contains more than one file within it, you will get a chance to decide which file(s) within it to open up. Otherwise the process will happen in the background and will not affect your normal **WordSmith** processing.

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Troubleshooting

13 Troubleshooting

13.1 list of FAQs

See also: logging 23.
These are the Frequently Asked Questions.
There's a much longer list of explanations under Error Messages 297.
Can't process apostrophes 292
Is this Russian, Greek or English? strange symbols in display 293
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No tags visible in concordance 292
Printing problem 295
Text is unreadable because of the colours 294
Too much or too little space between columns 292
Wordlist out of order 295
Won't slice pineapples 295

13.2 apostrophes not found

Apostrophes not processed

If your original text files were saved using Microsoft Word™, you may find **Concord** can't find apostrophes or quotation marks in them! This is because Word can be set to produce "smart" symbols. The ordinary apostrophe or inverted comma in this case will be replaced by a curly one, curling left or right depending on its position on the left or right of a word. These smart symbols are not the same as straight apostrophes or double quote symbols.

Solution: select the symbol in the character set in the Controller, then paste when entering your search word 129, or else replace them in your text files using Text Converter 221.
See also: settings 65

13.3 column spacing

column spacing is wrong

You can alter this by clicking on the layout 54 button.

13.4 Concord tags problem

no tags visible in concordance

If you can't see any tags after asking for *Nearest Tag* in **Concord**, it is probably because the Tags to Ignore 76 has the same format. For example, if *Text to Ignore* has **<*>**, any tags such as **<title>**, **<quote>**, etc. will be cut out of the concordance unless you specify them in a tag file 82. Solution: specify the tag file and run the concordance again.

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13.5 Concord/WordList mismatch

Concord/WordList mismatch

If **WordList** finds a certain number of occurrences of a (word list) cluster 285 but **Concord** finds a different number, this is because the procedures are different. WordList proceeds word by word, ignoring punctuation (except for hyphens and apostrophes). When **Concord** searches for a (concordance) cluster 101 it will take punctuation into account.

13.6 crashed

it crashed!

Solution: quit **WordSmith Tools** and enter again. If that fails, quit Windows and try again. Or try logging 24. The idea of Logging is to find out what is causing a crash. It is designed for when WS5 gets only part of the way through some process. As it proceeds, it keeps adding messages to the log about what it has found & done. When it crashes, it can't add any more messages! So if you examine the log you can see where it was up to. At that point, you may see a text file name that it opened up. Examine that text, you might be able to see something strange about it, eg. it has got corrupted.

13.7 demo limit

demo limit reached

You may have just downloaded, but you haven't yet supplied your registration details. To do this, go to the main WordSmith Tools window, and choose *Settings* | *Register* in the menu.

If you haven't got the 20-character registration code, contact Lexical Analysis Software. The ***only*** difference between a demonstration version 270 and a full version is: with the latter you can see or print all the data, with the former you'll be able to see only about 25 lines of output.

13.8 funny symbols

weird symbols

funny symbols when using WordSmith Tools

1. Check your text files. Look at them in **Notepad**. Do they contain lots of strange symbols? These may be hidden codes used by your usual word-processor. Solution: open them in your usual word-processor and *Save As*, with a new name, in plain text format, sometimes called "Text Only" or **.txt**. In Word 2003 the option looks like this:

and then choose Unicode:

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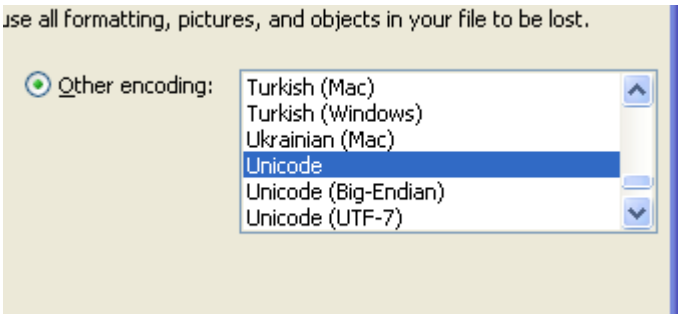

2. *Choose Texts*, select the text file(s), right-click and *View*. Does it contain strange symbols?
3. Use Text Converter 228 to clean up and convert and your text files to Unicode.

Greek, Russian, etc.

4. If the text is in Russian, Greek, etc. you will need an appropriate font, obtainable from your Windows cd or via the Microsoft website.
5. If you have several lists open which use *different* character sets, and you change Font 51 or Text Characteristics 72, the lists will all be updated to show the current font and character set, unless you first minimize any window which would be affected.

funny symbols when reading WordSmith data in another application

WordSmith Tools can Save 66 or Save As and Saves as text 61 by printing 60 to a file. "Save" and "Save As" will store the file in a format for re-use by **WordSmith**. This format is not suitable for reading into a word processor. The idea is simply for you to store your work so that you can return to it another day.

"Save as Text", on the other hand, means saving as plain text, by "printing" to a file. This function is useful if you don't want to print to paper from **WordSmith** but instead take the data into a spreadsheet, or word processor such as Microsoft Word. It is usually quicker to copy the selected text into the clipboard 265.

13.9 illegible colours

text unreadable because of colours

Solution: in *Settings*, choose *Colours*. You can now set the colours which suit your computer monitor. Monochrome settings are available.

13.10 keys don't respond

Keys don't respond

If a key press does nothing, it is probably because the wrong window has the focus. As you know, Windows is designed to let users open up a number of programs at once on the same screen, so each window will respond to different key-press combinations. You can see which window has the focus because its caption is coloured differently from all the others. The solution is to click anywhere within the window which you want to use, then press the key you wanted.

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13.11 pineapple-slicing

won't slice a pineapple

"*Propose to any Englishman any principle, or any instrument, however admirable, and you will observe that the whole effort of the English mind is directed to find a difficulty, a defect, or an impossibility in it. If you speak to him of a machine for peeling a potato, he will pronounce it impossible: if you peel a potato with it before his eyes, he will declare it useless, because it will not slice a pineapple.*" Charles Babbage, 1852.
(Babbage was the father of computing, a 19th Century inventor who designed a mechanical computer, a mass of brass levers and cog-wheels. But in order to make it, he needed much greater accuracy than existing technology provided, and had all sorts of problems, technical and financial. He solved most of the former but not the latter, and died before he was able to see his Difference Engine working. The proof that his design was correct was shown later, when working versions were made. The difficulties he encountered in getting support from his government weren't exclusively English.)

13.12 printer didn't print

printing problem

If your printing comes out with one or more column blank but others printed correctly, you may have a printer which can only manage black and white and not shades of grey. In the Controller 4, change the setting (*Adjust Settings* | *General*) to monochrome.

13.13 too slow

It takes ages

If you're processing a lot of text and you have an ancient PC with little memory and a hard disk that Noah bought from a man in the market for a rainy day, it might take ages. You'll hear a lot of clicks coming from the hard disk when memory 283 is low. Solution: get a faster computer, by installing more memory which makes a *big* difference), by defragmenting your hard drive, by using a disk cache, or by adjusting virtual memory settings. If you're running **WordSmith Tools** on a network, check with the network administrator whether performance is significantly degraded because of network access.
Solution 2: quit all programs you don't need. That can restore a lot of system memory.
Solution 3: quit Windows and start again. That can restore a lot of system memory.
Solution 4: save and read from the local hard disk, not the network.

13.14 won't start

it doesn't even start

Yikes!

13.15 word list out of order

wordlist out of order

Words are sorted according to Microsoft routines which depend on the language. If you process Spanish but leave the Language settings to "English", you will get results which are not in correct Spanish order, (e.g. **LL** will come just before **LM**).
Solution: choose your language 30 and re-compute the wordlist.

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Error Messages

14 Error Messages

14.1 list of error messages

List of Error Messages

See also: Troubleshooting 292.

Can only save WORDS as ASCII 299
Can't call other Tool 299
Can't make folder as that's an existing filename 299
Can't merge list 299
Can't read file 299
Character set reset to <x> to suit <language> 300
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File access denied 302
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Links between Tools disrupted 305
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No clumps identified 306
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No entries in Keywords Database 307
No Key Words found 307
No key words to plot 307
No keyword stop list words 307
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No match list words 307
No room for computed variable 308
No statistics available 308
No stop list words 308
No such file(s) found 308
No tag list words 308
Not a valid number 308
No wordlists selected 308
Original text file needed but not found 309
Registration string is not correct 310
Registration string must be 20 letters long 309
Short of Memory! 310
Source Folder file(s) not found 310
Stop list file not found 310
Stop list file not read 310
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Tag list file not read 310
This function is not yet ready! 311
This is a demo version 311
This program needs Windows 95 or greater 311
To stop getting this annoying message, Update from Demo in setup.exe 311
Too many ignores (50 limit) 311
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Two files needed 311
Truncating at xx words -- tag list file has more! 311
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Wordlist comparison file is faulty 312
Word-list file is faulty 312
WordSmith Tools has expired: get another 312
WordSmith Tools already running 312
WordSmith version mis-match 312
xx days left 312

14.2 .ini file not found

.ini file not found

On starting up, **WordSmith** looks for the **wordsmith.ini** file which holds your current defaults 65 . If you've removed or renamed it, restore it. This file should be in the same folder as the Tools are in.

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14.3 base list error

base list error

WordSmith is trying to access an word or concordance line above or below the top or bottom of the data computed. This is a bug.

14.4 can only save words as ASCII

Can only save WORDS as Plain Text

WordSmith Tools can't save graphics as a text file. If you get this error message, you can only save this type of data by copying to the clipboard 265 and pasting it into your word-processor.

14.5 can't call other tool

Can't call other Tool

Inter-Tool communication has got disrupted. Save 106 your work, first. Then, if necessary, close down **WordSmith Tools** altogether, then start the main **wordsmith.exe** program again.

14.6 can't make folder as that's an existing filename

Can't make folder as that's an existing filename

If you already have a *file* called C:\TEMP\FRED, you can't make a *sub-folder* of C:\TEMP called FRED. Choose a new name.

14.7 can't compute key words as languages differ

Can't compute key words as languages differ

Key words can only be computed if both the text file and the reference corpus are in the same primary language. You can compute KWs using 2 different varieties of English or 2 different varieties of Spanish, but not between English and French.

14.8 can't merge list with itself!

Can't merge list with itself

You can only merge 1 word list or key word database with 1 other at a time. Select (by clicking while holding down the Control key) 2 file-names in the list of files.

14.9 can't read file

Can't read file

If this happens when starting up **WordSmith Tools**, there is probably a component file missing. One example is **sayings.txt**, which holds sayings that appear in the main Controller 4 window. If you've deleted it, I suggest you use **notepad** to start a new **sayings.txt** and put one blank line in it.

If you get this message at another time, something has gone wrong with a disk reading operation. The file you're trying to read in may be corrupted. This happens easily if you often handle very large files, especially if it's a long time since you last ran *Scandisk* to check whether any clusters

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in your files have got lost. See your DOS or Windows manual for help on fragmentation.

14.10 character set reset to <x> to suit <language>

Character set reset to <x> to suit <language>

Prior to version 2.00.07, **WordSmith Tools** handled fewer character sets 264 and languages 30 than it does now. Accordingly, data saved in the format used before that version may not "know" what language it was based on. If you get this message when opening up an old **WordSmith** data file, it's because **WordSmith** doesn't know what language it derived from. Through gross linguistic imperialism, it will by default assume that the language is English!
If the data are okay, just click the save button so that next time it will "know" which language it's based on. If not, reset the language to the one you want in the Controller 4, *Adjust Settings* | *Text*, then re-save the list.

14.11 concordance file is faulty

Concordance file is faulty

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.CNC, .LST**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .CNC file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced by the current version of **Concord**.

14.12 concordance stop list file not found

Concordance stop list file not found

You typed in the name of a non-existent file. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.13 confirmation messages: okay to re-read

Okay to re-read?

A confirmation message. To proceed, **Viewer & Aligner** will now re-read the disk file. This will affect any alterations you've already made to the display. You may wish to save first and then try again later.
Also, Viewer & Aligner will try to read the whole text file. If you have a very big file on a slow CD-ROM drive, this will take some time.

14.14 conversion file not found

Conversion file not found

You typed in the name of a non-existent file. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.15 destination folder not found

Destination folder not found

WordSmith couldn't find that folder; perhaps it's mis-spelt.

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14.16 disk problem -- file not saved

Disk problem: File not saved

Something has gone wrong with a disk writing operation. Perhaps there's not enough room on the drive. If so, delete some files on that drive.

14.17 dispersions go with concordances

Dispersions go with concordances

They can't be saved 106 separately.

14.18 drive not valid

Drive not valid

WordSmith is unable to access this drive. This could happen if you attempt to access a disk drive which doesn't exist, e.g. drive P: where your drives include A:, C:, D: and E:.

14.19 failed to access Internet

Failed to access Internet

This function relies on a) your having an Internet browser on your computer, b) your system "associating" an Internet URL ending **.htm** with that browser.

14.20 failed to create new folder name

Failed to create new folder

A folder and a file cannot have the same name. If you already have a *file* called C:\TEMP\FRED, you can't make a *sub-folder* of C:\TEMP called FRED. Choose a new name.

14.21 failed to read file

Failed to Read

This may have happened because your disk filing system has got screwed up. This is especially likely to occur if you often use large files in your word processor. I would recommend you to run *System Tools* | *Scandisk*.

14.22 failed to save file

Failed to Save

Maybe because you had the same file open in another program or another instance of the Tool you're running. If so, close it and try again.
Or because the folder you're saving to is a read-only folder on a network, or because the disk is full, or because your disk filing system has got screwed up. This last problem is quite common, actually, and is especially likely to occur if you often use large files in your word processor. In that case run *Programs* | *Accessories* | *System Tools* | *Disk Defragmenter*.
If you're working on a network, you will be able to save 106 on certain drives and folders but not others; the solution is to try again on a memory stick or a hard disk drive which you do have the right to save to.

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14.23 file access denied

File Access Denied

Maybe the file you want is already in use by another program. You'll find most word-processors label any text files open in them as "in use", and won't let other programs access them even just to read them. Close the text file down in your word processor.

14.24 file contains none of the tags specified

File contains none of the tags specified

You specified tags, but none of them were found.

14.25 file has "holes"

File has "holes"

Your text file is defective. It may well contain useful text, but it also contains at least one unrecognised character such as character(0). The problem could have arisen because it was transferred from one system to another, part of the disk is corrupted, or else maybe the file contains unrecognised graphics, or else it is not a plain text file but e.g. a Word document 309.
You will see the context where the problem occurred and will be told roughly how far into the text it was detected.
WordSmith can proceed if you wish but you get a chance to skip the text.
You can solve this problem -- which will come each time you choose that text file -- by reading the text file into a word processor and re-saving it as a plain .txt file. Also, in File Utilities 6 there is a tool for finding such files.

14.26 file not found

File not found

This message, like Original Text not found 309, can appear when **WordSmith** needs to access the original source text used when a list was created, but cannot find it. Have you deleted or moved it? If the file is still available, you may be able to edit the filenames 69 in the filename window ( ) of this list.
Or the message may come after you've supplied the filename yourself. You may have mis-typed it. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.27 filenames must differ!

Filenames must differ

You can't compare a file with itself.

14.28 folder is read-only

For some purposes, WordSmith needs to save files e.g. lists of results you have made so that you can get at recent files again. To do this it needs a place where your network or operating system lets you save. Usually **`c:Program Files\wsmith5`** is fine, but in some institutional settings drive **`c:`** may be "read-only". If you see this message, choose *Adjust Settings* | *Folders* | *Settings* and select there a folder where you can write as well as read.

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14.29 for use on X machine only

For use on pc named XXX only

The software was registered for use on another PC. If you get this message, please re-install as appropriate.

14.30 form incomplete

Form incomplete

You tried to close a form where one or more of the blanks needed to be filled in before **WordSmith** could proceed.

14.31 full drive & folder name needed

Full drive:\folder name needed

When typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.32 function not working properly yet

function not working properly yet

This is a function under development, still not fully implemented.

14.33 invalid concordance file

Invalid Concordance file

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.CNC, .LST**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .CNC file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced by the current version of **Concord**.

14.34 invalid file name

Invalid file name

Filenames 279 may not contain spaces or certain symbols such as **?** and *****. In Windows before Windows 95 they had to be restricted to 8 letters and a dot and three more, too. Try again.

14.35 invalid KeyWords database file

Invalid Keywords Database file

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.KWS, .KDB**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .KDB file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced for a database by the current version of **KeyWords**.

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14.36 invalid KeyWords calculation

Invalid Keywords calculation
For **KeyWords** to calculate the key-words in a text file by comparing it with a reference corpus, both must be in the same language and both must be sorted in the same way (alphabetical order, ascending). If you see this message you are trying to compute KWs without metting these criteria. Solution: open each word-list and check to see it is OK and that it is sorted alphabetically in the same way. Check they have both been made with the same language settings and if necessary re-compute one or both of them.

14.37 invalid WordList comparison file

Invalid Wordlist Comparison file

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.LST, .CNC**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .CNC file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced as a comparison file by **WordList**.

14.38 invalid WordList file

Invalid Wordlist file

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.LST, .CNC**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .LST file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced by the current version of **WordList**.

14.39 joining limit reached

Joining limit reached: join & try again

Only a certain number of words can be lemmatised 165 in one operation. If you reach the limit and get this message,
1. lemmatise by pressing F4,
2. place the highlight on the head entry again
3. press F5 and carry on lemmatising by pressing F5 on each entry you wish to attach to the head entry
4. when you've done, press F4 to join them up.

14.40 KeyWords database file is faulty

Keywords Database file is faulty

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.KDB, .KWS**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .KDB file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced for a database of keywords, by the current version of **KeyWords**.

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14.41 KeyWords file is faulty

Key words file is faulty

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.KWS, .KDB**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .KWS file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced by the current version of **KeyWords**.

14.42 limit of file-based search-words reached

Limit of search-words reached

No more than 15 search-words can be processed at once, unless you use a file of search words 131 to tell **Concord** to do them in a batch, where the limit is 500.

14.43 links between Tools disrupted

Links between Tools disrupted

WordSmith Tools Controller 4 or an individual Tool has tried to call another Tool and failed. There may have been a fault in another program you're running or a shortage of memory. As inter-tool communication links 277 are vital in this suite, you should exit WordSmith and re-enter.

14.44 match list details not specified

Match list details not specified

You pressed the Match List 57 button but then failed to choose a valid match list file or else to type in a template for filtering. Try again.

14.45 must be a number

Must be a number

You typed in something other than a number. Be especially careful with lower-case **L** and **1**, and **O** (the letter) instead of **0** (the number).

14.46 mutual information incompatible

Mutual information list is incompatible

A mutual information list derives from an index file, and knows which index file it derives from when computed. Normally when it opens up, it opens up the corresponding index file too. If that index file is not found on your PC or has been renamed, you will see this message. The mutual information can still be accessed but a) what you see in terms of Frequency and Alphabetical lists refers to a different index file, and b) it will not be possible to get concordances directly from the listing.

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14.47 network registration used elsewhere

Network registration running elsewhere or vice-versa

The registration for use on a network is not valid for use on a stand-alone pc, and vice-versa. If you get this message, please re-install as appropriate.

14.48 no access to text file - in use elsewhere?

No access to text file: in use elsewhere?

The file cannot be accessed. Perhaps another application is using it. If so, close down the file in that other application and try again.

14.49 no associates found

No associates found

Alter settings (*Settings* | *Min & Max Frequencies*) and try again.

14.50 no clumps identified

No clumps identified

Alter settings and try again.

14.51 no clusters found

No clusters found

Alter the settings (*Settings* | *Clusters*) and try again. There were too few concordance lines to find the minimum number needed, or the cluster length was too great.

14.52 no collocates found

No collocates found

In the Controller 4, alter the settings (*Adjust Settings* | *Concord* | *Min. Frequency*) and try again. There were too few concordance lines to find the minimum number needed.

14.53 no concordance entries

No concordance entries found

If you got no concordance entries, either a) there really aren't any in your text(s), b) there's a problem with the specification of what you're seeking, or c) there's a problem with the text selection. Check how you've spelt the search-word and context word. If you're using accented text 264, check the format of your texts. If you're using a search-word file 131, ensure this was prepared using a plain Windows word-processor such as Notepad.

Have you specified any wildcards 129 (* and ?) accurately? If you are looking for a question-mark, you may have put **"?"** correctly but remember that question-marks usually come at the ends of words, so you will need ***"?"**.

Tip

Bung in an asterisk 129 or two. You're more likely to find book* than book.

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14.54 no concordance stop list words

No concordance stop list words

14.55 no deleted lines to zap

No deleted lines to Zap

You pressed Alt-Z but hadn't any deleted lines to zap 74. No harm done.

14.56 no entries in KeyWords database

No entries in Keywords Database

Alter settings and try again.

14.57 no key words found

No Key Words found

Alter settings and try again. The minimum frequency is set too high and/or the p value 148 too small for any key words to be detected. For very short texts a minimum frequency of 2 may be needed.

14.58 no key words to plot

No key words to plot

Had you deleted them all?

14.59 no KeyWords stop list words

No keyword stop list words

WordSmith either failed to read your stop-list file or it was empty.

14.60 no lemma list words

No lemma match list words

WordSmith either failed to read your lemma list file or it was empty.

14.61 no match list words

No match list words

WordSmith either failed to read your match list 57 file, or it was empty, or you forgot to check the action to be taken (one option is *None*). Or you tried to match up using a list of words, or a template, when the current column has only numbers. Or else there really aren't any like those you specified!

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14.62 no room for computed variable

No room for computed variable

There isn't enough space for the variable you're trying to compute.

14.63 no statistics available

No statistics available

Some types of word list created by **WordSmith Tools**, e.g. a word list of a key words database have words in alphabetical and frequency order but no statistics on the original text files. You cannot therefore call the statistics up in **WordList**. You might also see this message if the statistics file you're trying to call up is corrupted.

14.64 no stop list words

No stop list words

WordSmith either failed to read your stop-list file or it was empty.

14.65 no such file(s) found

No such file(s) found

You typed in the name of a non-existent file. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.66 no tag list words

No tag list words

WordSmith either failed to read your tag file or it was empty.

14.67 no word lists selected

No word lists selected

For **WordSmith** to know which word lists to compare, you need to select them, by clicking on one in each folder. If you've changed your mind, press Cancel.

14.68 not a valid number

Not a valid number

Either you've just typed in, or else **WordSmith Tools** has just attempted to read (e.g. from **wordsmith.ini**, the defaults 65 file), something which is expected to be a number but wasn't. Computers will not see the capital **O** as equivalent to the number **0**. Or else there is a number but accompanied by some other letters or symbols, e.g. ***£30***. If this happens when **WordSmith** is starting up, check out the **wordsmith.ini** file for mistakes.

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14.69 not a WordSmith file

The file you are trying to open is not a WordSmith Tools file. WordSmith makes files containing your results, files whose names end in **.LST, .CNC, .KWS**, etc. These are in WordSmith's own format and cannot be opened up by Microsoft Word -- likewise a plain text file or a Word **.doc** cannot usually be read in by WordSmith as a data file, but only as a text file for processing.

See also: Converting Data from Previous Versions 198

14.70 not a current WordSmith file

Not a Current WordSmith File

The file you are trying to open was made using WordSmith but either

- it's a file made using version 1-3

or

- it's a file made with the beta version of WordSmith 5 and the format has had to change (sorry!)

If the former, you may be able to convert it using the Converter 198.

14.71 nothing activated

Nothing activated

Some forms have choices labelled "Activated" which you can switch on and off. If they are un-checked, you can still see what they would be but **WordSmith** will ignore them.

14.72 original text file needed but not found

Original text file(s) needed but not found

To proceed, **WordSmith** needed to find the original text file 69 which the list was based on. But it has been moved or renamed.
Or if on a network, your network connection is not mapped, or the network is down ...or else the right disk or CD-ROM is not in the drive!

14.73 printer needed

WordSmith needs a printer driver to be installed, even if you never actually print anything. You don't need to buy a printer or to switch a printer on, but the Print Preview 60 function in Concord, WordList, KeyWords etc. does need to know what sort of paper size you would print to. If you get a message complaining that no printer has been installed, choose Start | Settings | Printers & Faxes and install a default printer (any printer will do) in Windows.

14.74 registration code in wrong format

Registration code must be as in this example

2 letters or numbers, a dot, then 4 numbers, dot, 4 numbers etc.
Example: XX.1234.5678.9012.3456 (dots every 4 letters)

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14.75 registration is not correct

Registration is not correct

It doesn't match up with what's required for a full updated version! The old registration code in earlier versions is no longer in use. **WordSmith** will still run but in Demonstration Version 270 mode.

14.76 short of memory

Short of Memory!

An operation could not be completed because of shortage of RAM 283

14.77 source folder file(s) not found

Source Folder file(s) not found

You typed in the name of a non-existent file. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.78 stop list file not found

Stop list file not found

You typed in the name of a non-existent file. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.79 stop list file not read

Stop list file not read

Something has gone wrong with a disk reading operation. The file you're trying to read in may be corrupted. This happens easily if you often handle very large files, especially if it's a long time since you last ran *Scandisk* to check whether any clusters in your files have got lost. See your DOS or Windows manual for help on fragmentation.

14.80 tag file not found

Tag File not found

You typed in the name of a non-existent file. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.81 tag file not read

Tag list file not read

Something has gone wrong with a disk reading operation. The file you're trying to read in may be corrupted. This happens easily if you often handle very large files, especially if it's a long time since you last ran *Scandisk* to check whether any clusters in your files have got lost. See your DOS or Windows manual for help on fragmentation.

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14.82 this function is not yet ready

This function is not yet ready!

Temporary message, for functions which are still being tested.

14.83 this is a demo version

This is a demo version

You will probably want to upgrade 270 to the full version.

14.84 this program needs Windows 98 or greater

This program needs Windows 98 or better

As of Version 4.0 and above, this is a 32-bit program (and a 32-bit help file).

14.85 to stop getting this message ...

Get an update. This is "annoyware" for the demonstration version 270.

14.86 too many requests to ignore matching clumps

The limit is 50. Do any remaining joining manually.

14.87 too many sentences

The limit is 8,000. Do the task in pieces.

14.88 truncating at xx words -- tag list file has more

The tag list file has more entries than the current limit. Or else it isn't a tag list file at all!

14.89 two files needed

You need to select 2 files for this procedure. Select (by clicking while holding down the Control key) 2 file-names in the list of files.

14.90 unable to merge Keywords Databases

Perhaps there wasn't enough RAM 283 to carry out the merge.

14.91 why did my search fail?

The standard search function (F12 or) for a list of data operates on the currently highlighted column. If you want to search within data from another column, click in that column first.
By default, a search is "whole word". Use * at either end of the word or number you're searching for if you want to find it, e.g. in any data consisting of more than one word. (The advantage of the asterisk system is that it allows you to specify either a prefix or a suffix or both, unlike the standard Windows search "whole word" option.)

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14.92 word list file is faulty

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.LST, .KWS**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .CNC file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced by the current version of **WordList**.

14.93 word list file not found

You typed in the name of a non-existent file. If typing in a filename 279, remember to include the full drive and folder as well as the filename itself.

14.94 WordList comparison file is faulty

Each type of file created by **WordSmith Tools** has its own default filename extension (e.g. **.LST, .KWS**) and its own internal structure. If you have another file with the same extension produced by another program, this will not be compatible. It would not be sensible to rename a .CNC file to .TXT, or vice-versa! **WordSmith** has detected that the file you're calling up wasn't produced as a comparison file by **WordList**.

14.95 WordSmith Tools already running

Don't try to start **WordSmith Tools** again if it's already running. Just Alt-tab back to the instance which is running. (You can, however, have several copies of each tool running at once.)

14.96 WordSmith Tools expired

Message for limited period users only. Your version of **WordSmith Tools** has passed its validity and is now in demo 270 mode. Download another from the Internet 268.

14.97 WordSmith version mis-match

Since the various Tools are linked 277 to each other, it is important to ensure that the component files are compatible with each other. If you get this message it is because one or more components is dated differently from the others.
Solution: download those you need from one of the contact websites 268.

14.98 XX days left

Message for limited period users only. At the end of this time **WordSmith** will revert to demo 270 mode.

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