

3. Introduction

MacLex's sorting function is designed for sorting dictionary records stored in one or more 'TEXT' files (which any word processor can open and edit). It assumes that information in each dictionary record will be stored in generically tagged fields¹. The generic tags may take any desired format, but must be unique in order for the program to be able to distinguish a tag from actual dictionary data. SIL's standard format markers², which begin with a backslash and then have one or more characters following, are supported; indeed, they are recommended - because the user can then be sure that MacLex will perform predictably.

The program will allow you to specify a special sorting order, to specify that certain characters be ignored when sorting, to ignore anything in parentheses at the start of a sort key, to specify up to three sort fields, and to sort in ascending or descending order.

There is a built in editor which will allow you to examine a file, provided the file does not exceed 32k bytes in length - for longer files you will need to use a commercial word processing program such as Microsoft WORD in order to examine or modify files. The built in editor allows you to easily define a special sorting order, or which characters should be ignored, without having to leave the program.

¹In a dictionary each 'entry' (alternatively called a 'record') contains many different kinds of information. Examples of the different kinds of information would be a part of speech, a meaning, a vernacular example, a translation of the example, a synonym, a related form, etc. It is useful for the computer to be able to distinguish one type of information from another. This is done by organising a dictionary record as a list of 'fields' - each type of field has only one kind of information in it. At the start of each field there is a unique marker - a 'generic tag', which is a unique string of characters that is different from similar markers at the start of all other fields. It is called a 'generic' tag because it represents the kind of data in the field. Following the tag will be the actual data the field contains. For example: a generic tag for a vernacular sentence example might be the three characters \ex, and following this might be a space and then the actual vernacular sentence you want to appear in the dictionary when it is printed. The use of a backslash in a generic tag is optional, MacSort will support any special character you might like to use - such as @, or #, or others. You don't have to use a special character in a generic tag - xxxx would be perfectly acceptable tag. The use of a backslash is a convention used in SIL, and is called "standard format".

²SIL's "standard format" means that each different field of information starts with a unique marker. The structure of the marker is simply a backslash (\), followed by from one to four characters, followed by a single space or carriage return. Examples would be \w , \syn , \ex , \com and so forth. It is up to the dictionary maker to choose the characters following the backslash - anything is permissible, the only constraint is that every marker be different from all others. People usually select characters that suggest the kind of data which follows. For example, \com would be a good choice for a comment field.

The program is quite fast. It will, for example, handle three and a half thousand dictionary records in a special sorting order, comprising over .5 megabytes, in less than two minutes. It handles multiple files, and naming files, automatically.

4. Lexicon organisation

The program assumes that the main sort key³ will be the initial field in each record. The user has to tell the program what the generic marker for this field is, and does so by means of the "sort dialog" - see below.

The format of a field in a record is the following:

generic tag space (or tab or carriage return) data carriage return⁴

That is, there are four elements. The generic tag comes first. It can be any unique character string, up to a maximum of 7 characters inclusive. Then comes a delimiting character which may be a space, or a tab, or a carriage return. Then comes the data (which may begin with spaces, tabs, etc. if you wish, though this is not recommended); and finally the end of the data is delimited by a carriage return (or by the backslash at the start of the next field's generic tag - this latter option is to support SIL's standard format markers).

You may have one or more blank lines between records if you wish, or if you prefer, no blank lines between records.

Each input file of dictionary data should start with a record - any characters preceding the generic marker of the first record in the file will be ignored (and therefore lost).

Examples of what dictionary records in standard format might look like might be as below, where Melanesian Tok Pisin is the vernacular used for purposes of exemplification. Records may be as complex or as simple as you like, but each must have at least one field.

lw dok

³The 'sort key' is the technical name for the information in each dictionary record that the program uses in order to get the entries into sorted order. Usually the sort key will be the vernacular word or phrase which starts each entry.

⁴You may have a backslash (\) instead of the carriage return, or even in addition to the carriage return (ie. following it). MacSort determines where the end of a field is by either the carriage return, or a backslash, whichever it finds first as it 'reads' the contents of the field from left to right.

\g noun

\m dog

\w meri

\g noun

\m woman

\m wife

\com may be used adjectivally to indicate female gender

\w soim

\g verb (trans)

\m show

The program is designed to make dictionary sorting simple. It assumes that all the files you wish to be sorted will be in one folder - or in the root directory. The sorted files are placed in the same folder, and the old versions are automatically deleted. You need only tell the program where the input files reside, and the sort parameters you require, and the program does all the rest. (Note: this has changed from earlier versions which required you define a separate folder for output files.)

The program does not support sending files to more than one folder or disk, nor does it support inputting files from more than one folder or disk. With hard disks being so prevalent these days, this is no problem.

Remember: each file is a text-only document, such as can be produced and read by any word processor. Each file is comprised of one or more records, and each record is comprised of one or more fields, and each field must start with a generic tag representing its data type. With just a few exceptions there is no fixed order or arrangement of fields in a record that you have to follow. Nevertheless, you will benefit more from MacLex's features, especially when doing reversals, if you establish rules for what fields are to be present, and keep their orderings as regular as possible.

There is no limit to the number of files, their sizes can be whatever you like, there are no limits to how many records your lexicon may have, and the total size of the lexicon is not limited. These parameters are limited only by disk space and memory. (Even the humble 1 megabyte MacPlus has enough memory to comfortably handle a lexicon of well over 20,000 entries.)

5. The Sort Dialog

When you choose either **File...** or **Folder...** in the Sort menu, you will get the dialog shown below. Choose **File...** if you want to sort just a

single file. Choose **Folder...** if you want to sort a folder of files. (It is not possible to choose to sort just selected files in a folder - you either sort one at a time, or the whole lot.) Note: the dialog shows what the dialog might look like when **Get Order...** and **Get Ignores...** have previously been chosen - the relevant text boxes will be filled in.

Sort Setup			
Sort Key Token	Length	<input checked="" type="checkbox"/> Ignore Data in (parentheses)	
1st	<input type="text" value="\w"/>	<input type="text" value="16"/>	<input type="checkbox"/> Apply order <input type="checkbox"/> Apply ignores
2nd	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Apply order <input type="checkbox"/> Apply ignores
3rd	<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Apply order <input type="checkbox"/> Apply ignores
Special Sorting Order:		<input checked="" type="radio"/> Ascending Order <input type="radio"/> Descending Order	<input type="button" value="Input..."/> <input type="button" value="Get Order..."/> <input type="button" value="Get Ignores..."/>
<input type="text" value="aA bB cC dD [{ (dj)(Dj) eE fF gG hH iI jJ kK lL ~ mM nN]} (ny)(Ny) (ng)(Ng) oO pP qQ rR (rR)(Rr) sS tT =+ (tj)(Tj) uU vV wW xX yY zZ"/>			
Ignore these characters when sorting:		<input type="text" value="- ."/>	
<input type="radio"/> Same filenames <input checked="" type="radio"/> Automatic filenames			
Number of output files wanted:		<input type="text" value="18"/>	<input type="button" value="Cancel"/> <input type="button" value="Start Sorting"/>

The top three rows of the dialog allow you to specify, for each row, what the sort key field's generic marker should be, how many characters to allow (as a maximum) in the sort key, whether or not to apply a special sorting order to the sort key, and whether or not to apply the "characters to be ignored" to the sort key.

Normally you will use only one sort field, so only the top line would be relevant. But if you have a number of records in which the sort keys are identical, then you may wish to impose an order on such records by specifying a second sort field. Similarly, the third sort field is there in case you want it.

You must use the first sort key and define a length for the key. You may, if you wish, use either one of the second and third sort keys, or both of them.

You must click the appropriate box on the same line if you want your special sorting order to be used, or the characters you specify for being

ignored to actually be ignored. If you don't do so, and there is something in the text box, then MacLex will give you a warning message and you can then check the appropriate box.

Default key lengths are:

- | | | |
|----|------------|-------------------------------------|
| 16 | characters | - for the first sort key |
| 8 | characters | - for the second or third sort keys |

Maximum key lengths are:

- | | | |
|----|------------|------------------|
| 32 | characters | - for the first |
| 16 | characters | - for the others |

Minimum key lengths are:

- | | | |
|---|------------|-----------------|
| 2 | characters | -for the first |
| 1 | character | -for the others |

The program uses less memory if you use (a) a shorter rather than longer sort key, and (b) fewer (preferably one) sort fields than more.

The memory required for the sort key and other data for each record can be estimated: to the length of the combined sort keys, add 10. For example: if you have a sort key of length 16, and don't use secondary or tertiary sort keys, then 16+10 bytes (characters) of memory will be used up per record. So if you have a 10,000 record dictionary, the sort table will be about a quarter of a megabyte in length. On a Mac Plus with 1 Mb of memory there will be over .6 of a megabyte of memory available for data, so such a dictionary could be sorted with ease.

5.1 The **Input...** button

Click this to get a file dialog which allows you to tell the program where the input files are - the files of lexicon data. If you had previously chosen the **File...** command from the **Sort** menu, then you would proceed to choose the actual file you want sorted. When you select it and click **Open**, you will then be sent back to the sort dialog., and may proceed to press other buttons, etc.

However, if you had chosen **Folder...** in order to sort a folder of files, then you only need to select any one of the files to be sorted. The program will do the rest. (Internally, the program notes which file you chose, and then determines which folder it belongs to. It then prepares a list of every file in that folder. So it does not matter which file you chose, the program will end up with the same list whatever your choice was.)

Any nested folders encountered in the folder of files will be ignored.

When the files are sorted, MacLex first (invisibly) changes their names, sorts them, and places the sorted results in files in the same folder. It then deletes the original files - the ones with the changed names. (It is always wise to have a backup of the files before sorting, in the unlikely event of a crash or power failure trashing one or more files.)

The finished files will either have the same filenames, or different filenames, depending on whether or not you clicked the **Same filenames** button, or the **Automatic filenames** button. In the latter case, an edit text box will allow you to nominate how many output files you want - you can have as few as one.

Note: there is a relation between the filename and the sort keys of the records in a file. This relation holds, independently of whether you choose **Same filenames** or **Automatic filenames**. The precise definition of the relation depends on whether you are sorting in ascending or descending order.

For ascending order, for each record in the file its sort key will be either equal to or greater than the filename. The evaluation of "equal to" and "greater than" is done using whatever sorting order happens to be in force - using the special order you have defined, or if no special order, then using the default order. In this way the filenames are guides to the contents of each file.

For descending order, for each record in the file its sort key will be either equal to or less than the filename. Similarly, the evaluation is done using whatever sorting order you have specified, or the default order, whichever happens to be in effect.

If you click the **Automatic filenames** button, then the message and text box at the bottom of the dialog will be displayed. The number in the text box will be equal to the number of files that MacLex found in the input folder when you earlier pressed the **Input...** button and proceeded to select a folder of files for sorting. If you have not yet pressed the **Input...** button, then the text box will just display the number 1.

This text box allows you to have some control over the number of output files, and therefore over their size. The more files you have, the smaller will be each individual file.

When you use the **Automatic filenames** option, the program will automatically calculate an appropriate filename for each file, using the

sort key of the first record placed in the file (this is true for both ascending and descending orders). The filename will just be a copy of the sort key (perhaps shortened a little), but before any modifications to the key have been made for such things as ignoring certain characters and/or implementing your special sorting order. Again, the filename will be a guide to the contents of the file.

Note: for ascending order when you choose **Automatic filenames**, the first filename will always be **A**. For descending order, the first filename will always be named **z**. Only for these two filenames will the filename not necessarily be an accurate guide to the sort keys of the records in the respective files. For instance, if some sort keys begin with certain punctuation characters which sort before upper case letters, then such records will be found in the **A** file, in correct order of course. Similarly, for descending order, if you have in the beginning of some sort keys some symbols which sort after lower case z, then such records will be in their proper order in the **z** file.

5.2 The **Start Sorting** button

This button launches the program into sorting mode. It first performs a number of checks and if it finds you have not filled out the dialog correctly, or forgotten to press a button, it will give you an error message and send you back to the sort dialog to allow you to fix the problem.

Then it will put up a status dialog which will inform you about some statistics (such as how many records in your dictionary, how many files, how long sorting took, the output filenames, etc).

While the sorting phase is quite fast there are three distinct steps. The first step builds a sort table - MacLex expands the table if you have a very large number of records. It does this by reading in each file one by one and accumulating the sort keys into the table.

Note: MacLex assumes that the total sort table plus the largest one of your input files will fit into available memory. NO CHECK IS DONE FOR THIS. On a standard one megabyte Mac, you have over 600 kilobytes of continuous memory free. That should be ample. The program does not need to be able to fit all of your dictionary files into memory at once - it puts in as many as will fit, but it has to be able to fit in at least one. The sort table is kept in memory during the entire process. Input files are swapped in and out as dictated by space requirements. This is all totally automatic and you need not worry about it.

The second step is the sorting of the table, using a quicksort algorithm.

The third step is the output loop during which the program uses the sorted table to order the records and it goes to the respective files and pulls out the records it needs in the required order to build the output files. The output files are not stored in memory. They are built on the output disk record by record. A visual bar keeps track of progress - it is updated every 80 records.

Cancelling Prematurely

The sort operation can be prematurely cancelled, safely, by typing the period (.) key while holding down the command key. All sorted files will be abandoned and removed from the disk, and the original state of the input files will be restored.

5.3 Other parts of the Sort dialog

5.3.1 Ignore Data in (parentheses)

Check this option if your sort keys may sometimes take the form:

generic marker (text to be ignored for sorting)DATASTRING

where between the parentheses you have text (eg. Mr. and Mrs.) which you want kept with the record, but not used for sorting purposes. The text comprising DATASTRING will be used for sorting and the parenthetical text ignored.

You can use this option even if there are no sort keys with any parenthetical text at the start of the field. The only penalty would be a slight (a second or two) increase in the time taken for the first step of the sorting process.

5.3.2 Special Sorting Order:

Below this heading is a large text box in which you may manually type in your special sorting order. Your typed string can be up to 254 characters in length, including spaces. The length is checked only when you press the **Start Sorting** button, so if your typed string is too long that is when you will find out about it.

There is a button, **Get Order...** which allows you to get the order from a file created earlier. This is the recommended way of getting the order you want, it saves typing the order each time.

You cannot save the manually typed order directly from the sort dialog. Normally you will create and save your special order from within the editor. But in case you forgot to do so, and you want to save your typed order for use at other times, proceed as follows:

- (a) drag over the typed string in the box to select it
- (b) choose **Copy** from the **Edit** menu
- (c) **Cancel** the sort dialog
- (d) choose **New** from the **File** menu
- (e) choose **Paste** from the **Edit** menu
- (f) choose **Save As...** from the **File** menu and then save your special order in a file of suitable name, and in a suitable folder
- (g) choose the appropriate command from the **Sort** menu to go back to the sort dialog - proceed with whatever else needs to be done.

5.3.3 Ascending Order / Descending Order

These two radio buttons allow you to control the order of records in the output files. Ascending order will put things in the order, say, a, b, c, d, etc. while descending order will put things in the order z, y, x, w, etc.

For the Curious

Actually, the only effect these buttons have is over the order of outputting records in the third step of the sorting process. If you choose descending order, MacLex will start with the last sort key in the sorted table and output records, working backwards to the first.

Note: if you use descending order for data which is in ascending order to start with, you should use **Automatic filenames** to allow the program to make the proper naming choices for your output files. If you don't, you won't lose any data, but one or more of your output files might have less in them than you expect (or nothing), and others might be much larger than expected.

MacLex has not been written to handle numbers as sort keys in an intelligent way. Numbers would be treated as text, so that 100 would sort earlier than 12, 13, etc. This is unlikely to be what you want, so be warned.

5.3.4 Ignore these characters when sorting:

This text box allows you to manually type in the characters to be ignored when sorting. Usually these characters are things like space,

hyphen, apostrophe, punctuation (if you use it), period, and anything else you don't want to have influencing the order of records.

This text box works like the text box for a special sorting order - except that you are allowed only up to 31 characters to be ignored, and this box does not know anything about multigraphs - every character is treated as a unit and is unrelated to every other one in the box.

You can get the characters from a previously prepared file using the **Get Ignores...** button.

You cannot tell the program to ignore a multigraph. If, for example, you typed (ng) into the box for ignoring characters, the program would treat this as four separate characters and proceed to ignore (,), n, and g.

Remember, MacLex conceptually separates your data from its own internal computations needed in order to get your data into the order you want. MacLex does not under any circumstances change your dictionary records in any way - it only reorders them. When we talk of "ignoring" characters, this is only done on copies of parts of your data - stuff that can be thrown away (and is thrown away) after MacLex has done its job. Your data is kept safe.

3. Defining a special sorting order

The rules for defining a special sorting order are quite simple. Firstly, if you have no special characters and you are satisfied with normal English alphabetical order, then you do not need to specify a special order. The program uses English order (more specifically, "ascii order") by default. Ascii order sorts upper case characters before lower case characters, and some punctuation characters before both.

If you have special characters, or if you want some other order than normal, you will want to specify what order the program is to use. To do this you merely supply a string of characters starting from the lowest in your special order, to the highest, and separated by one or more spaces.

If you want two or more characters to be considered as having the same "value" in the sorting sequence (eg. b and B) you need only type such characters together without any intervening space.

If you use a digraph, or a multigraph (ie. many symbols = one phoneme), then you must enclose each multigraph in parentheses. For example, if you type (ng)(Ng) then this sequence will instruct the program that ng

and Ng are each digraphs, and each are to be treated as equivalent to the other for sorting purposes.

Multigraphs are converted to a single character (of appropriate value) when the program actually uses your special sorting order. When you are considering how many characters to allow in a sort key, you therefore only need to consider how many phonemes you want to be involved, irrespective of how they are spelled. If you are not using a special sorting order then each symbol is treated as if it were a single phoneme.

The following example is the sorting order used in Djinang, an Australian language:

aA bB dD {[(dh)(Dh) (dj)(Dj) eE gG il kK lL `~ mM nN]} (ny)(Ny) (ng)(Ng) oO pP rR (rr)(Rr)
tT += (th)(Th) (tj)(Tj) uU wW yY

(In the above sequence, for your information, characters such as ` and ~, + and =, etc. are redefined in the printed form of the language to be underlined characters such as l, L, t, T, etc.)

The best way to handle a special sorting sequence is to store it in a file produced by MacLex's editor. Do the following:

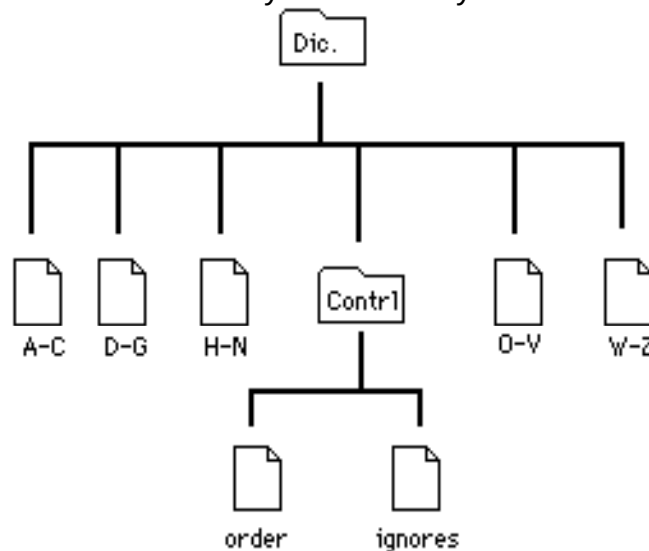
- (a) Choose **New** from the **File** menu
- (b) Type in the special sorting order - don't type any carriage returns
- (c) Choose **Save As...** from the **File** menu
- (d) Specify a descriptive name for the file, and a location different from where you have the dictionary data files stored, and click the **Save** button.

It is a good idea to have any special files of this 'control' type stored in a folder, and to include the folder in the same folder as all the dictionary files. This keeps your control files associated with the dictionary files, but the control files will not be treated as dictionary data files. MacLex ignores any folders it encounters amongst the data files you want to be sorted.

The diagram below should illustrate what is meant. There are 5 files of lexicon data in the folder called Dic., but in the same folder is another folder called Contrl. When the program is instructed to sort all the files in the folder Dic. it will totally ignore (for sorting) any folders within Dic. and whatever their contents might be. If you store your special sorting order in, say, the file "order", a suitable place to save it would be in the folder Contrl, since it is easy for you to find it, and if

you drag the folder Dic. to another disk, then your control files will automatically go with it.

The above is not obligatory, just recommended practice. The only thing you must be careful not to do is to have your control files and your dictionary files in the one folder.



Constraints

i. The total length of the list of characters which defines your special sorting order must not exceed 254 characters.

This should be plenty enough. If not, let me know and I will make the limit larger. The program will warn you if you exceed the limit, and chop off the extra ones from the end of the list.

ii. If the data you are sorting contains a mixture of languages, you may want to include the sum of the phonemes from both sources into the one sorting order.

If not, symbols not defined in your sorting order but encountered in the dictionary sort keys will be given their normal ascii value - this may or may not be what you want. At least any "forgotten" symbols will have a chance of being handled reasonably by this convention - they would appear later in the order than otherwise expected.

iii. It is not possible in the present version of the program to define two or more special sorting orders. Only one may be defined. You have the option of applying it to any or all of the chosen sorting fields, or of using the default (ascii) order for any or all sorting fields, or of mixing your special order with the default (ascii) order.

If anyone needs more power than this, let me know and I will consider adding code to permit a unique sort order to be defined for each sorting field.

7. The editor

New command from the **File** menu

When you select **New**, you will get an empty document window . The editor permits only one document to be open at a time. The window occupies the full screen and cannot be made larger, though it can be sized smaller by dragging the grow icon in the bottom right of the window.

Text typed into the window will autowrap when the right boundary is reached. If you size the window smaller, the horizontal scrollbar becomes active, and the text will autoscroll if you type past the right boundary of the window, or if you return to the left margin of your document.

No formatting is possible. Use a more sophisticated word processor for that. However, you can select the font and size that you want to use by making choices from the **Font** and **Size** menus. The **Size** menu also permits you to use nonstandard sizes if you wish. Font and size choices are not saved with your files, so these need to be set each time you open a file, if you want something different than the default font and size. The default is Geneva, 12 point. (Font and size are saved, however, when you save preferences using the **Preferences...** command on the Lexicon menu.)

The editor cannot handle files larger than 32 thousand characters. For larger files, use a commercial program such as WORD, and be sure to save the document as a "TEXT only" file if you want MacLex to be able to sort it.

Open command from the **File** menu

If you wish to open an existing file, use the **Open** command. It will open only TEXT files. (TEXT files are simply straight text, as typed from the keyboard, with no formatting information other than carriage returns, spaces, and tabs.)

Menu commands

The **Sort** menu is not accessible while a document is open in the editor, hence the **Sort** menu is dimmed as shown above. Similarly, if you have

selected an item in the **Sort** menu, then all the other menus are inaccessible and will be dimmed.

7.1 Editing functions

There are five menus available when a document is open for editing: the **File** menu for input/output choices and for printing; the **Edit** menu for the normal cut, paste, clear, and copy options; the **Font** menu for selecting a font (in case your data uses special characters); the **Size** menu for choosing a size that is easy to see on the screen; and the **Search** menu for normal find and replace functions. These types of operations should be familiar, since they occur in any word processing application on the Mac.

The items in each menu are listed below, in order, and their functions given.

File

- New** - to open a new empty document
- Open...** - to open an existing document
- Close** - to close a document file, or a dialog window
- Save** - to save a document to disk (if “Untitled” a Save As... is done instead)
- Save As...** - to name and specify destination for an “Untitled” document
- Revert** - to revert to the last saved copy of the existing document (any subsequent changes would then be lost)
- Get Order...** - to input a preexisting file containing your special sorting order
- Get Ignores...** - to input a preexisting file containing the characters you want to be ignored by the program when sorting
- Page Setup...** - to set page parameters (only limited options are available - this is not designed as a full scale word processing / printing application)
- Print...** - to print a document (it will have a fixed left margin and a fixed width, and neither can be altered)
- Quit** - to exit the program and return to the desktop.

Edit

- Undo** - not supported (it does nothing in edit mode)
- Cut** - cut selected material and place it on the clipboard

- Copy** - copy selected material and place it on the clipboard
- Paste** - replace the current selection with the clipboard contents; if no current selection, then insert the clipboard contents at the cursor location
- Clear** - remove the current selection without saving it on the clipboard

Fonts

The menu lists each font name, in alphabetical order, found in the system.

Note: when you select a font, it remains in effect until explicitly changed. It will also be used in the edit text boxes within dialogs; and for filenames, etc. Only one font may be used at a time. It is not possible to mix fonts within a document, in the editor.

Size

The menu lists the sizes: **7, 8, 9, 10, 12, 14, 18, 20, 24, 28, 36, Other...**

The “**Other...**” option permits the user to set any desired point size.

For any selected font, the sizes found in the system file are shown in outline style.

Character styles other than plain text are not supported.

Search

Find...- to permit a target string to be searched for in the document. The search starts at the cursor position and ends at the end of the file. A **From Start** button allows the user to cause the search to begin from the start of the file.

Change... - to permit both the finding of a target string, and then conditional replacement with a replacement string. The search works the same as the **Find...** dialog's search, and the **From Start** button is supported. Further options are allowed: either to replace, or replace and then find the next instance of the target string, or to replace all instances of the target string found after the current cursor position.

Find Again - permits the next instance of the target string to be searched for, without first reentering the dialog.

Replace & Find

- performs the function of the button having this name in the **Search** dialog, without having first to reenter the dialog.

Replace All

- ditto.

7.2 Editor constraints.

Do not try to use the editor to open or create a document longer than 32 thousand characters. If you inadvertently do, no harm will be done provided you do not try to save the document. Just close the window and specify that the changes, if any, be discarded.

The editor does not support character styles, or any formatting other than what is achievable with carriage returns, spaces, and tabs. All text has one font and size.

The document window can be made as large as will fit the Mac's screen, and no larger. Long lines will autowrap, so that all text can be viewed regardless of line length. If a window is resized smaller, the program will autoscroll left or right as needed. You can drag to select beyond the window's boundaries, both horizontally and vertically.

The editor will show the end (rather than the start) of the selected text, if all of the selection cannot fit in the window.

Printing assumes a text width of six inches (the default window size), and any document printed will conform to this constraint. Long lines will again be autowrapped so that no text is lost from the printed document. Essentially, what you see when the window is the default size will be what you get printed on the printed page. If you want fancier print options, use a commercial word processor.

7.3 Formatting and printing your dictionary with Microsoft Word

MacLex works well in combination with Michael Hore's Word Format program, which allows you to take one or more files of generically tagged information and automatically convert it to a formatted WORD file, including style names which can later be filled out within WORD itself. Word Format is available from the Jaars program library for Macintosh, and it should also be circulated with MacLex.

If you have a word processor other than WORD, but which can read WORD files, then you will be able to use that application to input Word Format's output files.

8. Using MacLex

This section will give you a step by step procedure for sorting your dictionary data, whether a single file, or a folder of files. Refer to earlier sections if anything is unclear.

8.1 To sort a file in normal (English) alphabetical order

The steps are as follows:

1. choose **File...** from the **Sort** menu
2. fill in the required parameters of the sort dialog, leaving the special sorting order text box empty
3. click the **Input** button - locate the file to be sorted and click **Open**
4. choose either **Same Filenames** or **Automatic Filenames** (and if you chose the latter, you may specify that the output be sent to more than one file - just type into the text box the number of output files you want)
5. click the **Start Sorting button** - when the sort is finished you will have an empty screen and be able to sort other files, or enter the editor, or quit the program, etc.

8.2 To sort a folder of files

The steps are the same as in section 8.1 above, except that for step 1 you do the following:

1. choose **Folder...** in the **Sort** menu

And in step 3 you can select and "open" any one of the files to be sorted - it does not matter which one you select.

8.3 To ignore specified characters when sorting

Proceed as in 8.1 or 8.2, except that in step 2 be sure to type into the box at the lower right of the sort dialog the characters you wish MacLex to ignore when it does the sorting.

Alternatively, if you have saved your 'characters to be ignored' in a file, then use the **Get Ignores...** button - and use the dialog which comes up in order to locate your file having the characters you want ignored. When you click the **Open** button, MacLex will load them and you will see them in the text box. If you opened the wrong file, just repeat the operation with the right file.

8.4 To specify a special sorting order

Proceed as in 8.1 or 8.2, except that in step 2 be sure to type your special sorting order into the large text box in the middle of the sort dialog.

Alternatively, if you have saved your special order in a file, use the **Get Order...** command - and use the dialog which comes up in order to locate your file having the special sorting order. When you click the **Open** button, MacLex will load your special order. If you got the wrong file by mistake, just hit the **Get Order...** button again and get the right file.