DICTTOOL

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Uses DICTCLIENT, ANALYZER

INTERNAL

INTRODUCTION

DICTTOOL is the user's interface to the Dictionary Server. The Dictionary Server is a prototype of a shared network resource for providing a suite of dictionary-based capabilities to programs running on client workstations.   It has on it the American Heritage dictionary, the Word Finder synonym package by Microlytics, a Proofreader, and the WordNerd, a package for searching for words based on their meaning.

(Note: The American Heritage dictionary has been licensed to us by Houghton-Miflin for research purposes only, and so we have not made the Dictionary Server generally available. The Dictionary Server should only be used by people within PARC.)

HOW TO USE DICTTOOL

When you load the DICTTOOL, it automatically adds a new menu item named "Dictionary" to the TEdit menu and the Background menu. The "Dictionary" menu item has three sub-items: "Get Definition", "Get Synonyms", and "Search For Word". Here is how each one works:

Get Definition

If you make a selection in a TEdit document, and then invoke the "Get Definition" command in that document, then DictTool will ask for a confirmation and then fetch the definition for that word from the Dictionary Server, printing it in a separate window. If there is more than one entry in the American Heritage Dictionary for that word, then it will print the definitions one after another. The Dictionary Server knows how to find the root forms of words, and so "breathing" "breathes" and "breathe" will all give you the same entry.

If there is no selection in the TEdit document, or if you deny the confirmation, or if instead of using the TEdit menu you use the Background menu, then DictTool will first prompt you for a word to look up and then fetch its definition. (Since it is very hard to make a null selection with TEdit, DictTool treats a one character selection as meaning "no selection". If you really want to look up a single letter in the dictionary, you can type it in when prompted for a word.)

If you want to look up several definitions at once, separate the entries with semi-colons followed by spaces. (i.e. "camera; photography; motion picture"). Semi-colons are used as delimiters because some of the entries in the American Heritage Dictionary have spaces and commas in them (as in "motion picture"). It also makes it easier to look up words in the output of the WordNerd (see "Search For Word" below).

Get Synonyms

The interface for getting synonyms is exactly the same as the interface for getting definitions. If you make a selection, then DictTool will first confirm the selection and then print out the synonyms in the same window that the definitions are printed in. If you don't make a selection, then DictTool will first prompt you for a word. The format of the information printed out is a series of synonym classes separated by carriage returns. Each synonym class begins with the part of speech that its elements belong to. The elements themselves are separated by commas.

Search For Word

The interface to the WordNerd is a little different from the other interfaces. Instead of typing just one word in, you want to type a list of keywords separated by spaces. For instance, if you were looking for the word for a mechanical model of the solar system, you might type:

> *Type keywords to search on*: mechanical model solar system

The WordNerd then searches for words that have at least two of these keywords in their definitions. The results would be sorted according to the number of keywords found, with the words having the most keywords printed first:

> **mechanical model solar system:** orrery

> **mechanical solar system:** mechanism

> **model solar system:** planetarium

> **mechanical system:** automation; bar1; component; degree of freedom; energy level; hookup; ignition; instrument; key1; linkwork; load; machine; neutral; perpetual motion; quantize; resonance; schematic; servomechanism; shafting; stress; suspension; unit

> **solar system:** Copernican; cosmic; Earth; Ganymede3; Jupiter2; Mars2; mercury; Milky Way; nebular hypothesis; Neptune3; Pallas; planet; planetesimal hypothesis; Pluto2; Saturn2; solar battery; space; sun; Uranus2; Venus2; Vesta2

(The numbers after some of the words mean that this is the nth entry of this word in the American Heritage Dictionary.) If there is a word in the list that you want to see the definition for, you can merely select it and get its definition with "Get Definition". In this case you would probably want to know what "orrery" means:

> **or|re|ry** *n., pl.* **-ries.** A mechanical model of the solar system. [After Charles Boyle
> (1676–1731), fourth Earl of *Orrery,* for whom one was made.]

There is also a mechanism for indicating that two words are synonyms of one another, and hence should not be counted as separate keywords for the purpose of deciding whether a word has the minimum two keywords. All you need to do is put parentheses around the words in question. For instance if you were looking for the word for the little plastic thing on the end of a shoe lace, you might try:

> *Type keywords to search on*: (shoe lace shoelace) (end tip)

And get in return:

> **shoe+ end+:** aglet; fall; heel1; lift; point; quarter; spike1; toe

(A plus at the end of a word indicates a synonym class.)

If you only give the DictTool one word, then it will print out all of the words in the dictionary that have that word in its definition.

Max Words

There are two sub-items in the "Search For Word" sub-menu: "Max Words" and "Min Keywords". The first sub-item, "Max Words", allows the user to specify the maximum number of words that should be returned on each search. DictTool is set up to only return 100 words at a time. If WordNerd finds more than a hundred words, then it truncates the list and indicates how many words it eliminated. If you want to see the words that were eliminated, just make the same request with the same keywords in the same order and the WordNerd will return the next 100 words. (If there is no selection in the document, then DictTool will prompt you with the last set of keywords so that this is easier.) However, if 100 words is too many or too few, you can change it with this menu item or by setting the global variable DictTool.MaxWords.

Min Keywords

DictTool is set up to only return a word if it has at least two of the user's keywords in its definition. If the user wants, he can raise or lower the minimum as he sees fit. The minimum only comes into play whenever the user gives more keywords than the minimum, otherwise the WordNerd looks for words that have at least one of the keywords in their definition. A minimum of 1 means that only one word has to match. A negative minimum means that the WordNerd will set the minimum relative to the number of keywords given. For instance, a minimum of -1 says that all but one of the keywords have to match for the word to be returned. A minimum of zero means that *all* of the words have to match.

Search For Phrase

The Search For Phrase command returns all of the entries in the American Heritage Dictionary that have a particular phrase in them. It does this with the help of the Search For Word command, which is why it is a sub-command of that command. Whenever you search for a phrase, the dictionary server first uses the Search For Word command to get the list of words in the dictionary that have all of the words of the phrase in it. It then looks up the definition of each of these words, and returns the words that have the phrase in their definition. This can be a very time-consuming operation, so you should use this command sparingly. But if you are concerned about locality and word order, then this command can save you a lot of time.

PROOFREADING

The Dictionary Server also provides proofreading facilities similar to the PROOFREADER package. The interface is exactly the same: there is a "Proofread" menu item on the TEdit menu which produces a special fixed menu for proofreading. The only difference is that all of the proofreading is done remotely on the server. You should only use the Dictionary Server for proofreading small documents; if you are going to do a lot of proofreading, it is better to use the PROOFREADER. (For more documentation on how to proofread, see PROOFREADER.)