

A-Kwic

COLLABORATORS

	<i>TITLE :</i> A-Kwic		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		October 27, 2024	

REVISION HISTORY

<i>NUMBER</i>	<i>DATE</i>	<i>DESCRIPTION</i>	<i>NAME</i>

Contents

1	A-Kwic	1
1.1	A-Kwic Full Text Search System	1
1.2	Introduction	1
1.3	Requirements	2
1.4	Starting A-Kwic	2
1.5	Environment Variables	4
1.6	Operating A-Kwic	4
1.7	Keywords	5
1.8	Wildcards	5
1.9	A-Kwic Menus	6
1.10	Appendix	6

Chapter 1

A-Kwic

1.1 A-Kwic Full Text Search System

A-Kwic

A Full Text Search Utility

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Produced by
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Version 2.0

Introduction
Requirements
Starting A-Kwic
Environment Variables
Operating A-Kwic
Keywords
Wildcards
Menus
Appendix

1.2 Introduction

A-Kwic is a text "searcher". You use it to search for keywords in a "database".

A database is a collection of "records". Each record contains an arbitrary number of lines of abstract text.

When the database is created, each record is scanned for keywords.

Various index files are created so that the record(s) containing the keyword can be rapidly retrieved.

A-Kwic allows the user to "AND" multiple keywords, so that only records containing ALL of the specified keywords will be retrieved. The user can "OR" keywords, so that records containing ANY of the ORed keywords will be retrieved.

There is also a Wildcard facility, where the user can specify the base of a keyword, that will match any keyword beginning with that base.

Once the user has specified the keywords, and if any matches are found, then A-Kwic presents a list of the titles of the matching records. The user can then view any of the records that he or she wishes.

1.3 Requirements

A-Kwic requires AmigaDos 2.04 or higher to run.

Memory requirements are usually less than 150K. However, the more keywords you specify, and the more record titles there are, the more memory is used.

A-Kwic uses Commodore's AmigaGuide product to display the help information.

If a specific path to the AmigaGuide command is not specified, via the GUIDECMD ToolType or CLI command option, the AmigaGuide command's directory must be in the CLI's or WorkBench's PATH in order for A-Kwic to be able to use it.

The A-Kwic.guide file must be in the same directory as the A-Kwic command.

1.4 Starting A-Kwic

You can use A-Kwic from the CLI, or the WorkBench.

To run from the CLI:

The syntax of the A-Kwic command is: (options in [] are optional)

```
A-Kwic [DATABASE] name [VIEWCMD cmd] [NOSORT] [GUIDECMD cmd]
```

where:

DATABASE specifies the database name to be searched. This is a required parameter. Note that a database is really a collection of files, all with a common base. So if the files were named 'fishdata.data', 'fishdata.index', etc, the database name would be 'fishdata'.

VIEWCMD specifies the command to be used to view any selected records. Any command used here should open it's

own window.

The user can put a "%s" where the file name to be viewed should be placed. If a %s is not used, the file name will be added to the end of the command string.

The default is the value of the PAGER environment variable. If that environment variable doesn't exist, the default is "run >nil: sys:utilities/more".

Example: "ed %s -sticky" - Invoke the CED editor

NOSORT A-Kwic sorts the record titles before displaying them in the "Records" window. If NOSORT is specified, the record titles are displayed in the order in which they occur in the database.

GUIDECMD Specifies the command to use to invoke AmigaGuide. AmigaGuide is used to display help information. The default is the contents of the GUIDECMD environment variable. If that environment variable doesn't exist, the the default is 'AmigaGuide', and the directory containing the AmigaGuide command must be in the CLI or WorkBench's PATH.

Examples:

A-Kwic fishdata - Use the database, in the current directory, called 'fishdata'

A-Kwic work:databases/fishdata - Use an explicit path to a database.

A-Kwic fishdata VIEWCMD 'myviewer %s' - Use the fishdata database with a user supplied viewer.

A-Kwic fishdata GUIDECMD sys:utilities/AmigaGuide

To run from the WorkBench:

Create a Tool or Project icon, with the command being A-Kwic.

The parameters are specified as ToolTypes in the Icon. If an Icon is a "Project" icon, associated with a database, then the ToolTypes are read from that Icon, not the A-Kwic Icon.

See the CLI command description for parameter information.

Note that you may have to specify explicit paths to your VIEWCMD, if it isn't in WorkBench's path.

The database can be selected via extended selection. Click on the database's Icon, then hold the SHIFT key, and double click on the A-Kwic Icon. In this case, the ToolTypes will be read from the database's Icon, not the A-Kwic Icon.

Any error messages from A-Kwic will open a console window. To remove this window, click on it's close gadget in the upper left hand corner.

1.5 Environment Variables

A-Kwic references two AmigaDos Environment variables:

PAGER specifies the command to be used to view any selected records. Any command used here should open it's own window.

The user can put a "%s" where the file name to be viewed should be placed. If a %s is not used, the file name will be added to the end of the command string.

If this variable is unset, a built-in default value of "run >nil: sys:utilities/more" is used.

This can be overridden by the VIEWCMD CLI or ToolType option. See Starting A-Kwic for more details.

GUIDECMD Specifies the command to use to invoke AmigaGuide. AmigaGuide is used to display help information.

If this environment variable is unset, a default value of 'AmigaGuide' is used, and the directory containing the AmigaGuide command must be in the CLI or WorkBench's PATH.

This can be overridden by the GUIDECMD CLI or ToolType option. See Starting A-Kwic for more details.

1.6 Operating A-Kwic

When A-Kwic starts up, you will be presented with the "Keyword Entry" window. The user enters the desired keyword(s) and either presses the enter key, or clicks on the "Search" button.

If any matches are found, then the number of records that matched the selection criteria (the number of "Hits") is displayed. If you desire to view the record titles, then click on the "View" button. If there are many matches, you may wish to go back and add more keywords in order to reduce the number of matches to a more manageable number.

The program must read a portion of each record to get it's title. This can take a while if there are many "Hits". Should you decide that you no longer wish to view the records, you can click on the "Abort" button. This will return you to the Keyword Selection window.

The "Records" window uses a scrolling list to display the titles of any hits that were found. The user can double click on any title, and the record will

be displayed.

The user can specify the command to be used to display a record. See the Starting A-Kwic section for details.

1.7 Keywords

A Keyword is an alphanumeric string of characters, at least two characters long. Single digit numbers are also valid keywords. Case is not significant.

The following characters are valid in a keyword:

```
0-9 a-z -./_
```

Only a certain number of characters in a keyword are significant. That number is specified when a database is created, and is displayed in the "Info" menu item. See Menus for details.

Example: If 4 letters are significant, then the keyword "ABCD" will match the following words: ABCD ABCD123 ABCDEFG

You can "AND" keywords by putting a space between them:

```
kw1 kw2 - This will only match records containing both keywords.
```

You can "OR" keywords by putting the vertical bar ("|") character between them:

```
kw1 | kw2 - This will match records containing EITHER kw1 or kw2
```

The order of analysis is from left to right, so that the keywords:

```
"kw1 kw2 | kw3"
```

will match records containing either "kw1 and kw2" or records containing "kw3". You can change the order by using parenthesis, so the keywords:

```
"kw1 (kw2 | kw3)"
```

will match records containing "kw1 and either kw2 or kw3".

You can also specify wildcards in your keywords.

1.8 Wildcards

Wildcards are used to match more than one keyword.

You specify a wildcard keyword by placing an asterisk ("*") at the end of the keyword.

The wildcard string "test*" will match any keyword beginning with the string "test".

"test*" would match:

```
"test" "test123" "testing"
```

It would not match:

```
"atest" "tesst"
```

The wild card character can only be used at the end of a keyword, and there must be at least two characters prior to the wildcard. The keywords '*', 'ab*c' or 'a*' are invalid, where 'ab*' would be valid.

1.9 A-Kwic Menus

There is a menu attached to the "Keyword Selection" window. It has one primary entry, "Project", with three sub-menus:

Info - Displays database specific information, such as the database name, the VIEWCMD, and the number of significant characters in a keyword.

About - Displays the version number and the author's address.

Quit - Exits A-Kwic

1.10 Appendix

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This program is freely distributable for non commercial uses.

Commercial usage, such as use on a "for profit" CD-ROM, requires prior approval from Starbound Enterprises. Contact the author for details.

Credit:

The following products were used to create the A-Kwic system:

SAS/C Version 6.51	- the SAS Institute
GadToolsBox	- Jan van den Baard
Flex	- Amiga port by Anders Hybertz
YACC	- Amiga port by William Loftus (I think)
CygnusEd Editor	- ASDG
RCS	- Amiga port by Heinz Wrobel

Many thanks to the folks on BIX, who answered my many questions regarding C programming. The more you think you know about C, the more you realize what you don't yet know!

To Do:

o AREXX - This will require a re-design of the A-Kwic system from a

"stated" to a "non-stated" system. This will also require (possibly) a re-design of the GUI.

Custom Code:

If you or your company think that A-Kwic could be of use to you in your business, the Author would be glad to talk with you regarding customization of the code for your specific purposes.

Any comments or suggestions would be welcome!
