[1] [2] {bml waisicon.bmp}**What is WAIS?**

Please select one of the following help topics, or read on for a WAIS overview.

Setting up WAIS

How to use WAIS

Button Bar Help

Wide Area Information Servers (WAIS, pronounced "ways") is an information retrieval system.   WAIS allows one or several sources of information to be easily searched using common English (or other languages).   Unlike most other search systems, WAIS compares the words contained in the search request to determine which sections of the searched document(s) are most relevant, and displays the name given to each section (it's "title") in order based on its relevance to the question.

Another major feature of WAIS is its ability to find information regardless of its location.   WAIS operates on local and wide area networks, including the world wide Internet network of networks. With WAIS, the location of information sources becomes transparent.   They may reside on the same machine with the client software, or may be located in another part of the world.

1[#] WHAT_IS
2[$] What is WAIS?

How to use WAIS

WAIS needs to know two things to conduct a successful search.   These are one or more words, phrases and/or "feedback" documents that describe the desired information (a question), and one or more sources to be searched for the information.

How to enter a question

How to select information sources

After you provide a questions and select sources, WAIS may be asked to conduct a search to determine what related information is available

How to start a search and retrieve responses

How to view responses

Using relevance feedback

Some special features are available in this version of WAIS.   These include the ability to using a telephone line and modem to contact information sources, the ability to search for information by it's geographic location, and the ability to open terminal sessions with other computer systems without exiting from WAIS.

Dial access to WAIS servers (SLIP)

Spatial searching

Terminal Emulation

How to enter a question

The first window displayed by WAIS is the Question Window.   Search words are entered in the "Tell me about:" area of the WAIS question window:

{bmc h_query.bmp}

By default, WAIS will use each word individually to find relevant information.   A typical WAIS query using this form is:

elephants, kangaroos, or other animals

WAIS will accept complete sentences, partial sentences, or individual words.

This example will locate information that includes the words ELEPHANTS, KANGAROOS, OTHER, and ANIMALS.   The titles for frequent references to these words, and/or uses of most or all of the words will be listed first in the WAIS response.

If the phrase OTHER ANIMALS is intended (rather than references to the word OTHER and the word ANIMALS), a phrase search may be indicated by enclosing the phrase in double quotes:

elephants, kangaroos or "other animals"

The word AND has special meaning in WAIS.   If the preceding search is entered as:

elephants, kangaroos and "other animals"

then the following documents will be identified as relevant:

documents including the words ELEPHANTS and OTHER ANIMALS,
documents including the words KANGAROOS and OTHER ANIMALS,
documents including all the words entered in the query.

{bml waisicon.bmp}**How to select information sources**

WAIS must be informed of the information source or sources to search using an entered question.   Three steps are required to identify information sources.

1.   Select File and then select Sources from the menu bar located at the top of the WAIS Question Window.   A ribbon bar button {bmc select.bmp} may also be used to display the Sources Window.

A Sources Window will be displayed that identifies available sources and selected sources.

{bmc h_source.bmp}

2.   Double click on one of the available sources listed in the lower display area.   The source title will be displayed in the upper (selected sources) area.   As many sources as desired may be selected from the lower window for inclusion in a search.   To remove a selected source from the upper window double click on the source in the upper window.   Sources may also be "dragged" to the upper window by placing the mouse cursor over the desired source, pressing the left button, and dragging the reference to the upper window while holding the button. Release the mouse button to "drop" the source into the upper window. Entries may also be removed from the upper window by either double clicking or dragging them from the upper window.

3.   When the desired sources are listed in the upper window, click on the DONE button located at the bottom center of the Sources Window.

How to start a search

A WAIS information search is started by clicking the SEARCH button located at the right top of the Question Window.

> {bmc h_search.bmp}

On completion of a search, WAIS will display the titles of relevant documents in the Results Area of the Question Window.

Search responses

On completion of a query WAIS displays the results in the Results Panel:

{bmc h_reply.bmp}

Four information items are displayed for each title.   The left most entry is the score for the document.   Documents that WAIS deems to be most relevant to the query are given higher scores and located near the top of the titles list.   Less relevant entries are placed towards the bottom of the list.

The second item displayed is the size of the document in characters.   The letter "K" means one thousand.   For example, and entry with a size of 1.5K means the document contains about 1,500 characters.

The third entry is a short title for the source from which the document originates. For example, an entry of FACT may indicate that the document comes from the World Fact book.

The fourth entry is the actual description of the document.

An additional area titled "Similar to:" is also a part of the Question Window.   This area and the two buttons labeled "Add Doc" and "Delete Doc" are described in the section on Relevance Feedback.

Viewing search responses

A document is selected for viewing by double clicking on the pertinent title line. In response, WAIS will retrieve the document and open a View Window to display the retrieved information.   Each word within the document that matches a word from the query will be highlighted.

A document displayed in the viewing window may be manipulated using the menu bar located at the top of the window.   Two primary entries are contained in the menu bar.   These are "File" and "Edit".

File Menu Bar Entries

Selecting the File menu bar entry will reveal three functions that are subordinate to the file entry.   These are "Save as", "Print" and "Done".

> Save as... {bmc save.bmp} - causes the document currently displayed in the View Window to be saved to a disk file.   A Windows standard dialog is invoked that prompts for particulars such as a file name to be used for the saved document.

> Print {bmc print.bmp} - causes the document currently displayed in the View Window to be printed.   A Windows standard dialog is invoked that prompts for particulars to be used for printing the document.

> Done - provides a return to the Question Window.   Function key 3 may be used as a short cut to return to the Question Window.

Edit Menu Bar Entries

Selecting the Edit menu bar entry reveals functions for manipulating the position and content of the window.

> Find Key {bmc find.bmp} - positions to the first or next screen within the document that includes words entered in the "Tell me about:" area of the Question Window.   Short cut key F5 may also be used for this function.

> Get Previous Document and Get Next Document - displays additional sub menu entries that support navigation from the currently displayed document to other related documents:

>> In Order - displays the next or previous document from the selected

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12$ Viewing search responses

source material, i.e., if Chapter 20 is currently displayed, Get Previous In Order will fetch and display Chapter 19.

Listed - displays the next or previous document based on the list order in the Results Area of the Question Window.

The following ribbon bar selections and short cut keys are available for these functions:

    F7 or {bmc prev.bmp}   Get Previous In Order
    F8 or {bmc next.bmp}   Get Next In Order
    Shift F7 or {bmc viewprev.bmp}   Get Previous Listed
    Shift F8 or {bmc viewnext.bmp}   Get Next Listed

Copy {bmc clip.bmp} - provides a copy of a block of text on the Windows clip board.   This text may be transferred using the Paste function of other Windows applications.   Short cut key Shift F6 may be used with this function.   The block of text to be copied is selected by pressing and holding the left mouse bottom and "dragging" the mouse until the desired text is displayed in reverse video.

Add Section {bmc addsect.bmp} - is used with <u>Relevance Feedback</u>

{bml waisicon.bmp}**Using relevance feedback**

WAIS provides a tool for using all or selected portions or one or several documents to locate similar documents.   This feature is exercised by placing entries into the "Similar to:" area of the Question Window.

{bmc r_feedbk.bmp}

The following steps are taken to use an entire document for relevance feedback:

1.   Highlight the document in the results area by clicking on the document title one time.

2.   Click on the Add Doc button located to the right of the "Similar to:" area.   Relevance documents may also be added to or removed from the "Similar to" area by dragging and dropping.

3.   Steps 1 and 2 may be repeated for as many separate document as desired.

4.   Press the Search button in the Question Window to initiate the information request.

Selected portions of documents are included in the "Similar to:" area from the Viewing Window.

1.   Select a block of text for inclusion in relevance feedback by highlighting the text.   Text is highlighted by pressing the left mouse button and "dragging" the mouse until the desired area is shown in reverse video.

2.   Select "Edit/Add Section" from the menu bar, or press short cut key F6, or press the Add Section ribbon bar button {bmc addsect.bmp}.

3.   Steps 1 and 2 may be repeated for as many sections, and for as many separate documents as desired.

4.   Press the Search button in the Question Window to initiate the information request.

How to set up WAIS

WAIS provides a number of capabilities for customizing the way searches are conducted and results are displayed.   These are all accessed by selecting the Setup menu option from the Query Window.

> Hide Buttons - causes the Add Doc and Delete Doc buttons to be hidden, and document titles presented in the Similar to: panel to be viewed at their maximum length.

> Maximize Displays {bmc max.bmp} - causes all windows that are opened during a WAIS session to be expanded to fill the entire display area.

> Sources - Presents a window where WAIS sources technical information may be manually added, changed, or deleted.

> Max Documents - Presents a window where you set the maximum number of documents that will be retrieved from each information source.   This number is also used to limit the total number of documents that will be displayed for all information sources.

> Link Names - Presents a window where the names of computer systems that may be contacted via the Internet are associated with their Internet addresses.   This feature only works in conjunction with information that is retrieved in the Directory Interchange Format (DIF).

> Filters - Presents a window where WAIS processing filters are defined.   A filter is a program that is passed a retrieved file when WAIS does recognize the file's format.   File type is the type code assigned to the file by WAIS.   File ext. is the file extension to be appended to a file created by WAIS and passed to the filer program.   Path and program name is the name of a windows program that will be started by WAIS and passed the file as a command line argument.

{bml waisicon.bmp}**Setting up WAIS sources**

WAIS sources may be manually defined, changed, or removed using the Source Editor.

> {bmc h_edsrc.bmp}

> 1.   Click on an existing entry to display connection information.

> 2.   Overtype any entry or combination of entries and click on Add to create a new entry.   The title must be unique to add a new entry.

> 3.   Overtype any entry or combination of entries and click on Change to modify and existing entry.   The title may not be changed for an existing entry.

> 4.   Click on an existing entry and then click on Delete to remove an entry.

{bml waisicon.bmp}**Dial access to WAIS servers (SLIP)**

WAIS supports an automated scripting language for access via a modem to Serial Link Internet Protocol (SLIP) services.

The SLIP dialer script is contained in the file named WAIS.SLP

Automated logon is started by selecting Aids/SLIP Dial from the Question Window, or by pressing the {bmc slipdial.bmp} button.

The following entries may be used in any combination in the WAIS.SLP file:

WAIT n

Causes a delay of n seconds, after which the following statement will be processed

WAIT n   "literal value"

Waits up to n seconds for literal value to be received from the SLIP server.   A time-out error is generated if n seconds elapse without receiving the literal value.

SEND "literal value"

Sends literal value to the SLIP server.

PROMPT "literal value"

Opens a prompt window for input by the WAIS user.   Literal value is displayed in the prompt window.   The user provided response is sent to the SLIP server when either ENTER is pressed or the OK button is clicked.   If ENTER is pressed a carriage return character will terminate the response.

CAPTURE n "literal value"

Saves received data until the literal-value is encountered.   The received data is then placed in the IP field of the Trumpet TCP initialization file.   This function allows the IP address displayed by the SLIP command to be dynamically provided to TCP.

Any literal value may include control characters.   Control characters are indicated by the carat sign followed by a single character.   Only the low five bits

of the character following a carat are sent.

{bml waisicon.bmp}**Spatial searching**

WAIS includes the ability to display locations on Earth related to information presented in the View Window, and to include locations as search criteria when querying WAIS servers that support the spatial search feature.   Servers that do not support spatial searching will ignore location information, if it is provided.

Click here for information on special controls for manipulating the map.

To display a spatial reference:

> 1.   In the View Window, WAIS will add a menu item titled Show Map...
>
> 2.   Clicking on Show Map or the {bmc map.bmp} will display the Spatial Locator Window.

To enter a desired spatial location:

> 1.   From the Question or Viewing Windows, select the Aids / Map menu entry or click on the {bmc map.bmp} button.
>
> 2.   Use the left mouse button to enter   the desired search area as an irregular polygon.
>
> 3.   Use the right mouse button to erase entries defined using the left mouse button.

Polygons outlined in red may be saved for inclusion in later searches:

> 1.   Press the {bmc loadsave.bmp} button or select File / Load/save from the Map menu.
>
> 2.   Enter a unique name in the list box.
>
> 3.   Press the Add button.
>
> 4.   Press the Done button.

To retrieve a previously saved search polygon:

> 1.   Press the {bmc loadsave.bmp} button or select File / Load/save from the Map menu.
>
> 2.   Select a previously named entry from the list box.

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22[$] Spatial searching

3. Press the Load button.

4. Press the Done button.

Spatial searching map controls

{bmc h_scntls.bmp}

#²⁵ $²⁶ {bml waisicon.bmp}**Terminal emulation**

WAIS includes the ability to open a window for a connection to another Internet host computer system.   This feature allows connection to specialized computer applications that are described in WAIS information sources that employ the Directory Interchange Format (DIF).   When WAIS encounters a document containing the phrase "Catalog Link:" the name following the phrase will be used to establish a telnet connection.

$25^{\#}$ TELNET
$26^{\$}$ Terminal Emulation

{bml waisicon.bmp}**Button Bar help**

WAIS displays "button bars" for short cut access to common menu commands in three windows.   These are the Question WIndow, Viewing Window, and Map Window.   The menu selections for each button are described below

Question Window buttons

> {bmc select.bmp} File / Select Sources
> {bmc max.bmp} Setup / Maximize Displays
> {bmc clear.bmp} Aids / Clear
> {bmc telnet.bmp} Aids / Telnet
> {bmc map.bmp} Aids / Map
> {bmc slipdial.bmp} Aids / SLIP Dial

Viewing Window buttons

> {bmc save.bmp} File / Save as...
> {bmc print.bmp} File / Print
> {bmc find.bmp} Edit / Find key
> {bmc prev.bmp}   Edit / View next document / In order
> {bmc next.bmp}   Edit / View next document / Listed in questions
> {bmc viewprev.bmp}   Edit / View previous document / In order
> {bmc viewnext.bmp}   Edit / View previous document / Listed in questions
> {bmc clip.bmp} Edit / Copy
> {bmc addsect.bmp} Edit / Add section

Map Window buttons

> {bmc loadsave.bmp} File / Load/save location
> {bmc recenter.bmp} Edit / Recenter
> {bmc cpyin2ot.bmp} Edit / Copy in to out
> {bmc clearin.bmp} Edit / Clear input
> {bmc clearout.bmp} Edit / Clear output

27# BUTTONS
28$ Button Bar help