WinSpeech Help Index

Overview

WinSpeech 3.0 reads English text and produces speech sound to the audio devices in your PC.   The system requirements are,

.IBM PC or compatible system running Windows 3.1 or higher.
.Hard disk with 3 MB or more free space.

(Sound card is recommended but not required for running the WinSpeech 3.0.)

WinSpeech 3.0 can take text input from the following sources:

1. Editing window: Text in the editing window can be from typing in manually, pasting from the Clipboard, or opening   a file.   WinSpeech 3.0 can read files in text or Windows Write (.wri) format.

2. The Clipboard: WinSpeech 3.0 is able to read the text content on the Clipboard directly. Automatic mode allows speaking to start whenever the contents on the Clipboard are changed.   Hot key is used for speech control so it can be pressed directly from the client applications.   This feature allows WinSpeech 3.0 to be used as a speech add-on utility for many existing Windows applications.

3. DDE link: WinSpeech 3.0 provides Windows DDE interface to get text from other Windows applications to talk, so it can be used as a simple speech engine for other programs that wish to implement text-to-speech function.

4. Command line text string: A literal string can be specified in the command line to be spoken during the starting up of the WinSpeech program.

For assisting low vision users, audio guidance is available throughout the program for reporting the current status and repeating the dialog messages by pressing a hot key.

WinSpeech generates speech by first translating English text into a sequence of phonic symbols.   Custom dictionaries are used for looking up words that are mispronounced by the internal algorithm.   A Dictionary Editor is included for users to create their own dictionaries.

WinSpeech 3.0 is designed as a 16-bits application.   It has been tested on the Windows 95 extensively.

Getting Started

A main window appears after the WinSpeech program is invoked.   On top of the main window are the Menu Bar and a row of graphic buttons for input <u>commands</u>.   Below the graphic buttons there is a small area in white background for displaying the ongoing speech from the Clipboard or the DDE channels.   In the center of the main window is the text area for editing and displaying the main text contents.   The <u>control panel</u> locates on the top right corner of the main window, and it contains three sliders for volume, tempo, and pitch adjustments.   On the bottom of the main window there are two status display areas in gray background colors.   The one on the left shows miscellaneous program status, and the one on the right shows the name of the file that is in use.

Main Menu commands

FILE   Contains commands that load, save document files, or exit.
EDIT   Contains commands for editing text.
READ   Starts or Stops the text reading.
OPTIONS   For setting options that affect the operation of the WinSpeech program.
LANGUAGE   For selections of Dictionary or Voice Font to use.
INFORMATION   For Help and About information.

FILE MENU

Contains the sub-menu for maintaining files, and for exiting from the program.

NEW   To clear the contents in the text area.

OPEN   To load a document file into the text area.

SAVE   To save the document in the text area to the opened file.

SAVE AS   To save the document in the text area to a specific file.

EXIT   To exit from the WinSpeech program.

WinSpeech 3.0 can read files in ASCII text and Windows WRITE (.WRI) formats.   When opening a WRITE file, only the text portion of the file will be read.   The formatting information of the WRITE file is ignored, and a new file name will be given in order to save it since WinSpeech cannot save files to WRITE format.

EDIT MENU

Contains the sub-menu for editing the document in the text area.

CUT   To cut (delete) the selected text from the document and place it onto the Clipboard.

COPY   To copy the selected text from the document and place it onto the Clipboard.

PASTE   To paste (insert) a copy of the Clipboard contents at the cursor position, or to replace the selected contents.

DELETE   To delete the selected contents.

UNDO   To undo the last change.

READ MENU

Contains the sub-menu for controlling the document reading.

START   To start reading the document.   If one section of the document is selected (highlighted), only the selected section will be read.   If no selection is made to the document, reading will be started from the cursor position to the end of the document.

START LOOP   To start reading the document continuously until the PAUSE or STOP command is given.

PAUSE   To stop (interrupt) the reading and leave the cursor at current location.

STOP   To stop (interrupt) the reading and reset the cursor to its original location.

Control Panel

Control Panel locates on the top right corner of the main window and it contains three sliders for adjusting volume, speed, and pitch.   To adjust, point the mouse cursor at the slider and hold down the left button to drag it up or down.

Volume   To adjust the volume of the speech.   Move it up to increase volume, down to decrease volume.   The volume adjustment affects only the "WAVE" output device.   The master volume which affects other sound devices such as MIDI or CD will not be changed.   If you move this slider all the way up (or down) and still feel the volume is too weak (or loud), you need to adjust the master volume by using the program that comes with your sound card.

Tempo   To adjust the tempo (speed) of the speech.   Move it up to increase speed, down to decrease speed.   If you are changing the tempo in the middle of the speech, you will have to wait for one or two sentences before the new tempo setting takes effect.

Pitch   To adjust the pitch of the voice.   Move it up for higher pitched voice, down for lower pitch.   Similar to the Tempo control, the new setting will not be in effect until the next one or two sentences if you are changing the slider in the middle of the speech.

OPTIONS

The Options dialog lets you change variables that affect the program operations.

DDE Option:

Enable DDE Talking   Check this button to enable the DDE server interface for talking. When DDE is disabled, the internal DDE conversations still go on but the contents will be ignored.   Default is to enable.

Clipboard Options:

Auto   Check this box to let the program speak the text on the Clipboard whenever the contents changed.   If this box is left blank, the talking started only when the hot key is pressed.   Default sets to Auto.

Hot Key   To select the hot key for Clipboard talking control.   You may pick the key or mouse button shown on the list box alone or with a combination of the Control and the Shift keys as the hot key.   The hot key is used as a toggle switch for starting and stopping the talking from the Clipboard.   Default hot key is <Ctrl><F1>.   For more information on hot key selection, please refer to Appendix C.

Coach options:

Enable Coach   Check this box to enable the Talking Coach function.   Talking coach let you hear the current program status or a dialog message content by the pressing of a hot key. Default is to enable.

Hot Key   To select the hot key to be used for Coach.   You may pick the key or mouse button shown on the list box alone or with a combination of the Control and the Shift keys as the hot key.   Default is to use <F9>.

Language options:

Translate Punctuation   Check this box to let the punctuation symbols in the text to be translated into English words, e.g., "(" is read as *parenthesis*.   When this box is left blank, punctuation symbols are skipped during the reading.   Default is to disable the translation.

Spell all capital words   Check this box to translate words that contain all capital letters into alphabets.   For example, "COD" is read as *see-oh-dee*.   Default is to enable this feature.

To activate the changes and exit, press the OK button.   To leave without changes, press the Cancel button.

LANGUAGE MENU

Contains the sub-menu for Dictionaries and Voice Font files selection.

Dictionary   To select a custom dictionary file to be used in the program.   WinSpeech 3.0 comes only with a very simple dictionary file *GENERAL.WSD*.   Users can create their own custom dictionaries by using the Dictionary Editor program.   Dictionary files are normally named with *.WSD* extension.

Voice Font   To select a Voice Font file to be used in the program.   Voice Font files contain the voice database for the WinSpeech speech engine to produce speech.   Different Voice Font files can have different voice characteristics (e.g., male vs. female, enunciation styles) or database processed with different sampling rates and digitized resolutions.   The only speech font file comes with the WinSpeech 3.0 is the *USENM11A.WSF*, which is a low pitched young male sound with 8 bits resolution and 11.025KHz sampling rates.

(The speech engine allows more than one Voice Fonts to be loaded at the same time, so you can use different Voice Fonts in WinSpeech application and the Dictionary Editor for talking even though they share the same speech engine.)

INFORMATION MENU

Contains the sub-menu for help and program information.

HELP   To invoke the help.

ABOUT   To display the WinSpeech program information.

DDE Server Interface

The DDE server interface allows other Windows applications to initiate a DDE conversation and send data to WinSpeech for speaking.   The following diagram shows the conversation between a DDE client application and the WinSpeech.

DDE Client   WinSpeech

WM_DDE_INITIATE

                                      WM_DDE_ACK

WM_DDE_POKE

                                      WM_DDE_ACK

(... more WM_DDE_POKEs)

                                      (... more WM_DDE_ACKs)

WM_DDE_TERMINATE
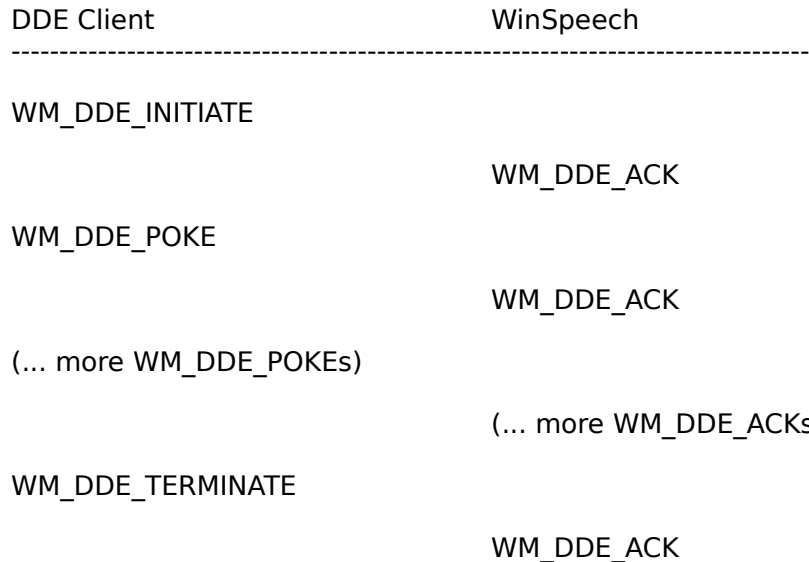
                                      WM_DDE_ACK

The DDE client application initiates a conversation by sending the WM_DDE_INITIATE message, with the application name "WSPEECH", and topic "TALK".   After the WinSpeech responds with the acknowledge, the client sends DDE poke messages with the text string specified as data for WinSpeech to speak (the item names in the poke messages are ignored).   When the client is finished, it sends a DDE terminate message to signal the end of the conversation.

To enable the DDE talking, the "Enable DDE" button in the Program Options dialog needs to be checked.   If this button is left unchecked, the DDE conversation can still go on, but the poked data will be ignored by the WinSpeech.

Talking Coach

WinSpeech 3.0 has a "Talking Coach" feature for providing audio instructions to the user. Talking coach reports current program status when a hot key is pressed.   For example, it reports "Ready to read." when a file is just loaded and has not been modified, and when the input focus is on another Windows application, it says "Focusing on another program". When a warning or error message box appears, the talking coach speaks out the content of the message automatically, and if the hot key is pressed when a message box is on the screen, it repeats that message.

Working With Other Windows Programs

WinSpeech 3.0 let you add speech to your existing Windows applications, such as word processors, spread sheet programs, E-mail readers, web browsers,... or just any program that can put text to the Clipboard.

To use this speech add-on function, all you need to do is to start the WinSpeech program and make sure the Clipboard option is set to "Auto".   After that, you can start or go back to your main application and continue your work there.   When you want to listen to something from your application, just use the mouse to highlight it and then press <Ctrl>C and the text should be read out to you. (This will do a COPY that puts text to the Clipboard.   Most applications do it this way but some don't - please consult the manual of the application to make sure.)

You can stop and restart the speech by the pressing of a hot key (or a mouse button) from your main application program.   Since the speech control is an additional function to your main application, you need to pick a key that is not being used by the main application to avoid conflict.   This is usually not a problem because WinSpeech offers a wide selection of keys (and mouse buttons) to be used.   However, some word processor programs use up almost everything on the keyboard and it is difficult to find spare ones.   Appendix C gives a list of some popular programs with keys can be used for this speech control function that have been tested.

Note that if you use a mouse button (or a mouse button together with <Ctrl> and <Shift> key) as the hot key then there should be no conflicting problem because you can usually press the mouse button outside of your application window.

Command Line Parameters

WinSpeech 3.0 lets you specify some of the options in the command line during the program start up.   These options include, suppressing the show up of the title (logo); automatically load or load and read a text file, or read a literal text string; and to force it to a minimized window after the start up.

The command line format for the WinSpeech 3.0 program is:

wspeech *param1 param2*

The *param1* represents one or more of the following letters combined.   If one or more of these letters do not show on the command line, their default values apply.   Note that you may use either uppercase or lowercase letters because they are not case-sensitive.

T   To suppress showing the WinSpeech title during the start up.   Default is to show the title.
L   To load the file specified by *param2* during the start up.   Default is to load the file that was opened from the last time running the WinSpeech program.
P   To read a file or a literal string specified by *param2*.   Default is not to read.
M   To minimize the WinSpeech window when starts.   Default is to show the window.

param2 specifies either a file name or a literal text string.   When a text string is enclosed in quotation marks ("), it is taken as a literal text string, otherwise it is for specifying a file name.   The file name format follows the DOS full file name convension with device, path, and file name.   If no path name is given, the working directory will be used as the path.

The maximum length of the total command line string is 120 characters.

Example one: Suppresses title, minimizes window, and says "How are you ?" when program starts.

wspeech TmP "How are you ?"

Example two: Load (but not read) a file "C:\TXT\WELCOME.TXT"

wspeech L C:\TXT\WELCOME.TXT

Neither of the parameters appears when the WinSpeech 3.0 is installed by the setup program initially, so all default conditions apply.   To change command line parameters, do the following:

1. Focusing on the Program Manager, and put the highlight to the WinSpeech icon of the WinSpeech program group.
2. Select "Properties" from the "File" Menu.
3. Enter the new command line text to the "Command Line" box, and press OK.

APPENDIX A   Phoneme Symbols Information

'   Represents that the following vowel need to be stressed.

_   Represents a silence period.

Aa   Represents a "short O" sound, as in *ox , odd*.

Ae   Represents a "short A" sound, as in *map , bat*.

Ah   Represents a "short U" sound, as in   *up , love*.

Ao   Represents a "medium O" sound, as in   *ball , raw*.

Aw   Represents a long vowel sound heard in   *out , loud*.

Ax   Represents a "weak A" sound, as in   *along , system*.

Ay   Represents a "long I" sound, as in   *bite , ice*.

Eh   Represents a "short A" sound, as in   *get , set*.

Er   Represents a long vowel sound as in   *hurt , merge*.

Ey   Represents a "long A" sound, as in   *cape , aide*.

Ih   Represents a "short E" sound, as in   *big , if*.

Iy   Represents a "long E" sound, as in   *bee , mighty*.

Ow   Represents a "long O" sound, as in   *over , boat*.

Oy   Represents a diphthong, starts with a "short O" and then becomes a "short e", as in *toy , oil*.

Uh   Represents a "short U" sound, as in   *book , mood*.

Uw   Represents a "long U" sound, as in   *two , zoo*.

B   Represents a voiced consonant "B" sound, as in   *buy , cab*.

Ch   Represents a voiceless consonant sound, as in   *child , beach*.

D   Represents a voiced consonant "D" sound, as in   *do , hood*.

Dh   Represents a voiced consonant sound, as in   *that , either*.

F   Represents a voiceless consonant "F" sound, as in   *fit , beef*.

G   Represents a voiced consonant "G" sound, as in   *go , big*.

Hh   Represents a voiceless consonant "H" sound, as in   *hit , behave*.

Jh   Represents a voiced consonant "J" sound, as in   *joy , fudge*.

K   Represents a voiceless consonant "K" sound, as in   *kid , took*.

L   Represents a voiced consonant "L" sound, as in   *list , final*.

M   Represents a voiced consonant "M" sound, as in *mom , him*.

N   Represents a voiced consonant "N" sound, as in   *now , on*.

Ng   Represents a voiced consonant sound, as in   *ink , ring*.

P   Represents a voiceless consonant "P" sound, as in   *pig , stop*.

R   Represents a voiced consonant "R" sound, as in   *red , or*.

S   Represents a voiceless consonant "S" sound, as in   *sit , miss*.

Sh   Represents a voiceless consonant sound, as in   *she , bush*.

T   Represents a voiceless consonant "T" sound, as in   *too , fit*.

Th   Represents a voiceless consonant sound, as in   *thin ,   path*.

V   Represents a voiced consonant "V" sound, as in   *vote , live*.

W   Represents a semivowel "W" sound, as in   *win , away*.

Wh   Represents a combined sound of "H" and "W", as in   *why , what*.

Y   Represents a semivowel "Y" sound, as in   *year , lawyer*.

Z   Represents a voiced consonant "Z" sound, as in   *zoo , those*.

Zh   Represents a voiced consonant sound, as in   *vision , leisure*.

APPENDIX B   Reading Without A Sound Card

WinSpeech 3.0 uses the sound driver installed in the Windows system for playing sound.   If your computer does not have a sound card, you can still run the WinSpeech program by playing sound from the PC's internal speaker.   To play from the internal speaker, you need to have a speaker device driver installed in your Windows system.   When you run the WinSpeech installation, the setup program tests to see if your system has the proper device driver installed, and gives you an option to let the setup program install the device driver for you.

The device driver for the PC's internal speaker included here is a product of the Microsoft Corporation.   The notices and license information that come with the device driver (license.txt, audio.txt, and speaker.txt) should be observed and agreed to if you need to use it.

APPENDIX C   Tested Applications List

The following is a list of applications and some keys can be used that have been tested together with the WinSpeech 3.0.   It is provided here for reference only.   No assumption should be made to the accuracy of these information.

Adobe Acrobat Reader 2.1
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

America Online 2.5 (Main system area)
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

CompuServe WinCIM 2.0.1 (Main system area)
        <Ctrl> F2
        <Shift> F2
        <Ctrl> <Shift> F2

GNN Web Browser, E-mail reader (GNNmessenger) 1.20
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Grammtik 6.0
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Microsoft Excel 5.0
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Microsoft PowerPoint 4.0
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Microsoft Word 6.0
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F4

Netscape Navigator 2.01
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Windows Calendar
        <Ctrl> F1

        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Windows Cardfile
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Windows Help system
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Windows Notepad
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

Windows Write
        <Ctrl> F1
        <Ctrl> <Shift> F1
        <Ctrl> <Shift> F2

WordPerfect 5.1 (CMU Template)
        <Ctrl> <Shift> F2
        <Ctrl> <Shift> F8

WordPerfect 5.1 (DOS 5.1 Template)
        <Ctrl> <Shift> F2
        <Ctrl> F5
        <Ctrl> <Shift> F5

APPENDIX D   Contacting Information

PC WholeWare develops text-to-speech engine and speech related application programs for the PCs.   A web site has been set up for providing the latest products information, support, and freeware download.   The home page URL:
http://users.aol.com/WholeWare/index.html

E-mail addresses:
wholeware@aol.com
103671.2141@compuserve.com

To order the WinSpeech 3.0, send a check of $40 (must be drawn from an U.S. bank) pay to the order of PC WholeWare, together with a note: "WinSpeech", and mail it to:

> PC WholeWare
> 33 Justin St.
> Lexington, MA 02173
> U.S.A.

You can also register it through the shareware services provided by the CompuServe. Please refer to the CIS for more information on this.

The only available distributing media are the 3 1/2" 1.44M diskettes.

The text-to-speech engine is available in DLL for application developers, for both distributing and non distributing usages.   Please contact PC WholeWare for more information.   The DLL that comes with the WinSpeech 3.0 is for use with the WinSpeech application program only. You may NOT use the DLL for other purposes.