



Motion Works MediaShop™ : Sound Annotator

Sound Annotator is a software tool that combines text and digitized speech to create text that is spoken as well as seen. This tool consists of two components:

- 1) a Visual Basic Custom Control, called the *Sound Annotation Control*(SNDAN.VBX).
- 2) a stand-alone editor , called the *Sound Annotation Editor* (SANEDIT.EXE), that is provided for creating sound files used by the Sound Annotation Control.

To learn how to use help, press F1.

Contacting Motion Works

Sound Annotation Control

Sound Annotation Tool

Contacting Motion Works

If you have any questions, comments, or suggestions, Motion Works would like to hear from you. You can contact Motion Works at:

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Sound Annotation Control

Properties

Events

Description

The **Sound Annotation** control is a custom Visual Basic Control that allows users to create interactive text which is associated with sound (usually digitized speech). When the **Sound Annotation** control is played, the text is hi-lighted as the associated sound is played.



Filename

SNDAN.VBX

Object Type

SndAn

Remarks

This control requires a sound file with extension .san. Also see the sound annotator editor for methods of combining wave files and text to produce ".san" files.

Distribution Note When you create and distribute applications that use the Sound Annotation Control, you should install the file SNDAN.VBX in the customer's Microsoft Windows \SYSTEM subdirectory . The setup kit included with the Professional Edition of Visual Basic provides tools to help you write setup programs that install your applications correctly.

PROPERTIES

There are a number of properties used to access the Sound Annotation control under Visual Basic. The following is a list of available properties for this control. Asterisk(*) denotes properties that apply to this control only or that require special consideration when using.

Properties

<u>*About</u>	FontItalic	<u>*PlayMode</u>
<u>*BackColor</u>	FontName	<u>*ScrollEnabled</u>
BorderStyle	FontSize	TabIndex
<u>*Clickable</u>	FontStrike	TabStop
<u>*CurWord</u>	FontUnder	Tag
<u>*CurWordIndex</u>	Height	Top
DragIcon	<u>*HiBackColor</u>	Visible
DragMode	<u>*HiForeColor</u>	Width
<u>*Enabled</u>	Index	
<u>*Filename</u>	Left	
FontBold	Name	
ForeColor	<u>*Play</u>	

EVENTS

The following is a list of available events for this control. Asterisk(*) denotes events that apply to this control only or that require special consideration when used with it.

Events

ClickIn	MouseMove	<u>*PlayFinished</u>
DragDrop	<u>*PlayStart</u>	<u>*WordClickIn</u>
DragOver		

About Property

Description	Displays an About box for the control which contains the name of the control, version number and the author.
Visual Basic	Not Applicable
Remarks	This property can only be used during development time and is activated by double clicking on the About property field which displays "Click here..."
Data Type	Not Applicable

BackColor Property

Description	Specifies the background color to be used by the control.
Visual Basic	[form.]SndAn.BackColor[=settings%]
Remarks	Double click on this property to see available colors during development time. During runtime, this property can be set like a standard color property.
Data Type	Integer (Long)

Clickable Property

Description Determines if the user can interact with the Sound Annotation control.

Visual Basic [form.]SndAn.Clickable[=settings%]

Remarks The primary use for this property is to prevent the user from triggering any actions in the Sound Annotation control. This allows all actions from the Sound Annotation control to be set by the program.

Setting

True

False

Description

(Default) User Interaction is enabled

User Interaction is disabled

Data Type Integer(Boolean)

CurWord Property

Description Identifies a word when it has been clicked on. When the user clicks on a word, the CurWord will contain the actual text of that word and the CurWordIndex property will contain the index of that word.

Visual Basic [form.]SndAn.CurWord[=settings%]

Remarks This is a **run-time** property which means that this property is only available during run-time. The indexes start at zero for the first word and increment by one for each word thereafter. For example,

Text : The cow jumped over the moon

Index: 0 1 2 3 4 5

Data Type **String**

CurWordIndex Property

Description This property contains the index of the last word that was clicked on by the user.

Visual Basic [form.]SndAn.CurWordIndex[=settings%]

Remarks This is a **run-time** property which means that this property is only available during run-time. The indexes start at zero for the first word and increment by one for each word thereafter. For example,

Text : The cow jumped over the moon

Index: 0 1 2 3 4 5

Data Type Integer

Enabled Property

Description Enable or disable the sound annotation control during run-time.

Visual Basic [form.]SndAn.Enabled[=settings%]

Remarks Setting this property will have the following affects.

<u>Setting</u>	<u>Description</u>
True	(Default) Enable
False	Disable

Data Type Integer (Boolean)

Filename Property

Description	Specifies the path of the sound annotation file to be used by this control. Once the file has been specified, the text in the file will be displayed.
Visual Basic	[form.]SndAn.Filename[= filename\$]
Remarks	Changing the filename will automatically change the text that is displayed in the sound annotation window. If the file is changed during runtime, playing is stopped.
Data Type	String

HiBackColor Property

Description	Specifies the background color of the highlighted text.
Visual Basic	[form.]SndAn.HiBackColor[= color]
Remarks	Double click on this property to see available colors during development time. During runtime, this property can be set like a standard color property.
Data Type	Integer (Long)

HiForeColor Property

Description	Specifies the color of the highlighted text.
Visual Basic	[form.]SndAn.HiForeColor[= color]
Remarks	Double click on this property to see available colors during development time. During runtime, this property can be set like a standard color property.
Data Type	Integer (Long)

Play Property

Description This property triggers playing of the Sound Annotation Control.

Visual Basic [form.]SndAn.Play[=settings%]

Remarks Setting this property will have the following affects.

<u>Setting</u>	<u>Description</u>
True	Play
False	(Default) Stop

Data Type Integer (Boolean)

PlayMode Property

Description Setting this property will determine if an individual word or a whole sentence is played at a time.

Visual Basic [form.]SndAn.PlayMode[= settings%]

Remarks The following table lists the PlayMode property settings for this control.

<u>Setting</u>	<u>Description</u>
0	(Default) Play a word
1	Play the complete sound annotation.

Data Type Integer (Boolean)

Visual Basic The following code tells the Sound Annotation control to play a word at a time.

```
SndAn1.PlayMode = 0
```

ScrollEnabled Property

Description Enables or disables the Scrolling ability of the Sound Annotation Control.

Visual Basic [form.]SndAn.ScrollEnabled[= settings%]

Remarks The following table lists the ScrollEnabled property settings for this control.

<u>Setting</u>	<u>Description</u>
True	(Default) Enabled
False	Disable

Data Type Integer (Boolean)

PlayStart Event

Description	Indicates that a sound has started to play in the sound annotation control.
Visual Basic	Sub SndAn_PlayStart()
Remarks	No parameters are passed into this event.

PlayFinished Event

Description	Indicates that a sound has completed playing in the sound annotation control.
Visual Basic	Sub SndAn_PlayFinished()
Remarks	No parameters are passed into this event.

WordClickIn Event

Description Indicates a particular word or group of words is clickin during Run-time.

Visual Basic Sub SndAn_WordClickIn()

Remarks Parameters:

- X As Single
- Y As Single
- WordID As Integer
- WordText As String



Sound Annotation Tool

Description: The **Sound Annotation Tool** is an editor used to combine data from both wave and text files to produce an output file which will be used by the Sound Annotation Control within Visual Basic. The Sound Annotation Control annotates each word or group of words that is read.

How To...

(General Step by Step Tutorial)

The following are instruction steps of general and frequently used operations in the Sound Annotation Tool. Various ways of performing each of the general operation will be discussed. For a detail discussion of every features and operations of this editor, please refer to the Reference Section.

[Invoke the Editor](#)

[Open an Annotated Sound File](#)

[Import a Wave File](#)

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[Hi-light a Wave](#)

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Reference Section...

User Interface, Menu and Dialogs Explained:

[The Main Editor Screen](#)

[The Sound Annotator Test](#)

To Invoke the Editor

To use the Sound Annotation Tool simply select "**Run...**" from the File menu in Program Manager and then execute "**SANEDIT.EXE**" (***) Note: Remember to enter the correct path as well (***)). Another way is to create an icon in the Program Manager for the application and then double click on the icon .

To open an Annotated Sound File

Annotated Sound Files for this editor have an extension of .SAN. Annotated Sound Files combine both text and wave together to form a file that is recognized by the Sound Annotation Control in Visual Basic.

The following ways enable users to activate this function:

Menu: Select "Open" under the File menu.

Toolbar: Right-single click the icon  to open the "Open Sound Annotator File" dialog box.

To import a Wave File

Raw sound wave files with extension .WAV can be imported into the Sound Annotation Editor to be used in creating Annotated Sound File.

The following ways enable users to activate this function:

Menu: Select "Import Wave" under the File menu.

Toolbar: Right-single click the icon  to open the "Open Wave" dialog box.

To import Text File

Raw text files with extension .TXT can be imported into the Sound Annotation Editor to be used in creating an Annotated Sound File. Input text files should be less than **256 bytes**.

The following ways enable users to activate this function:

Menu: Select "Import Text" under the File menu.

Toolbar: Right-single click the icon  to open the "Open Text File" dialog box.

To Hi-light a wave

Procedures:

1. Left single-click on the mouse on the starting location of the wave which is to be highlighted.
2. Drag the mouse from the starting location to the desired end of the wave (The hi-lighted area is colored black.).

To Hi-light the text

Assume that the user has imported text into the editing area.

Procedures:

1. Left double-click the mouse on the text editing area. A text box would appear consisting of all the text being hi-lighted
2. To move to the front of the text, left single-click the mouse on the beginning of the text.
3. Simply hi-light the text of interest. (The hi-lighted area is colored blue.).

Meaning of the text colors:-

BLUE - linked to wave

BLACK - not linked wave

RED - part of a group (linked or not linked).

To link wave with text

Procedures:

(The following procedures assume that the user has loaded a raw sound wave into the editor and that the text has been either inputted through the keyboard or from a raw text file.)

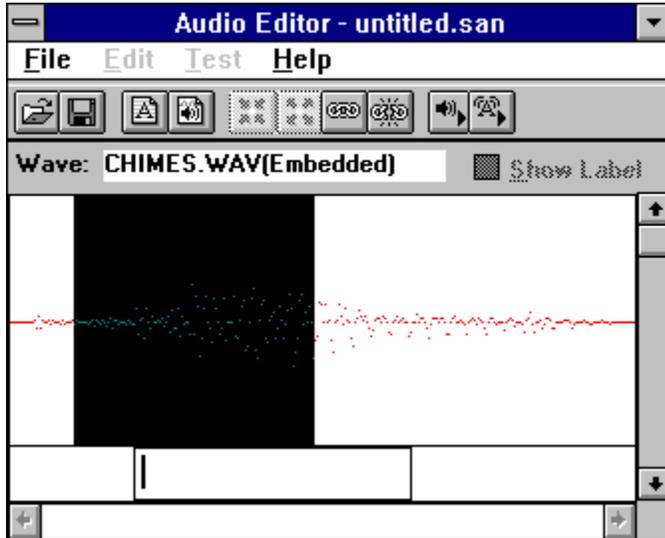
1. Hi-light section of the wave to be linked to text.
2. Left double-click the mouse on the text section to activate the input text area.
3. Hi-light portion of the text to be linked.
4. Click on the icon  to link the wave to the text or hit "enter" key.

Related Topic:

[Text Editing and Wave Display Areas](#)

Text Editing and Wave Display Areas

The following diagram indicates the hi-lighted wave and the text input area. Click on an area to trigger the description dialog box.



To Unlink a wave

Procedures:

1. Left double-click the mouse on the hi-light text. The associated section of the wave will also appear as a hi-lighted section.
2. Click on the icon  to unlink the text.

To display null chunks

What is a NULL Chunk?

Null Chunk is a portion of the sound wave that do not produce any sound. The purpose of having NULL chunk is to use as a medium to trigger events.

Null Chunk is not displayed by default. In order to display a NULL chunk, do the following:

1. Left double-click the mouse on the text.
2. Toggle the "ShowLabel" checkbox.
3. Press "enter" key

To delete null chunks

Null Chunks are deleted by not checking the "Show Label" sign. In order to delete a NULL chunk, do the following (assuming the "ShowLabel" checkbox was checked):

1. Left double-click the mouse on the text.
2. Remove the checkmark on the "ShowLabel" checkbox.
3. Press "enter" key

To Play Sound

The following ways enable the user to play wave sound or portions of the wave:

Menu: Select "Play Sound" under Test Menu.

Toolbar: Right-single click the icon .

To Test Results

The following ways enable the user to test the result of their sound annotation:

Menu: Select "Test SAN" under Test Menu.

Toolbar: Right-single click the icon 

To Group Chunks  to start grouping
 to end grouping

There are two play modes available :- WORD and SENTENCE modes.

Grouping only works in WORD Play mode. In short, Grouping functions by allowing association of text chunks to sound phrases.

Reason:

When you play the Annotated Sound file in sentence mode, the words are highlighted based on which word is linked to which portion of the wave. However, there are cases where it is hard to get a clear sound for a specific word in a wave file, but you may wish to maintain the individual hi-lighting of the word in sentence play mode. You would therefore group a few words together as a phrase which can be played under word mode. The end result is getting a clear meaning of the sound.

To Ungroup Chunks

Untie multiple text chunks to sound phrases.

Procedure:

1. Hi-light the text to be ungrouped.
2. Select option "Remove From Group" under the "Edit" menu.

To Zoom waves

Use the vertical scroll bar to zoom in or out of the wave. The least level of zoom is on the top of the Scroll bar where as the highest level is at the bottom.

To Embed a wave

Embedding a wave file places the wave file inside the .SAN file so that the text from the SAN file is not dependent on any external files or whether they are places in the right path.

To Save

Choose 'Save' or 'Save As...' from the File Menu. For the *Save As* option, you will be prompted with the *Save As... dialog*, where you will have the opportunity to specify a filename of your choice as the name of the to-be-saved annotated sound file.

Exit

Select "Exit" under the File menu.

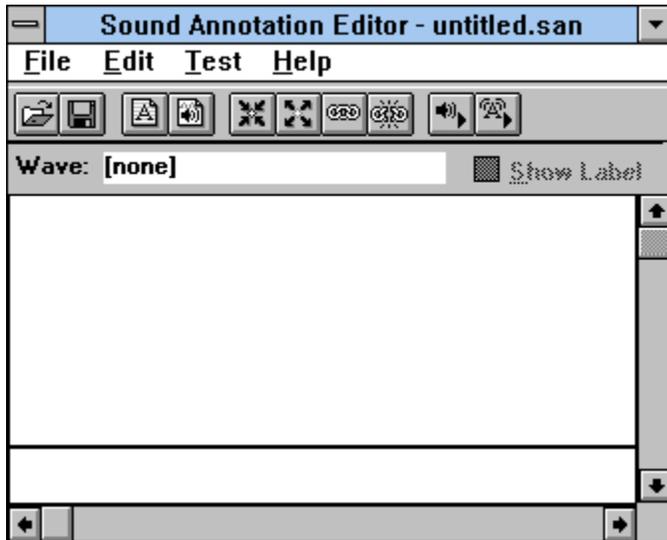
To Link the Sound Data File to the Sound Annotation Visual Basic Control:

1. Add the SNDAN.VBX module to your Visual Basic project. (Choose 'Add File...' from the the *File Menu* in Visual Basic). The  icon will appear on the toolbox palette if the Sound Annotation custom control is loaded successfully.
2. Double-click on the  icon on the toolbox to create a Sound Annotation control on the Form you are working on.
3. double-click on the FileName property from the Property Window and choose the Sound Data File that you have just created and saved using the Sound Annotation Editor. If the Sound Data file (extension .SAN) is loaded successfully, the Filename property should contain the path of Sound Data file created using the editor.

Main Editor Screen

The following is a sample picture of the interface:

Click anywhere on the picture to get context specific help on any of the interface elements.



Sound Annotator Dialog

To annotate the sound wave and text, use the following dialog:



General Text Display Field

All input text is displayed in this area.

Text Edit Field

Area to edit/add text to the existing text field.
Double-click the left mouse button on the Text Field to activate.

Hi-Light Wave

The hi-lighted section of the sound wave is in black.

File Menu

New

Open

Close

Save

Save As

Import Text

Import Wave

Exit

Edit Menu

Link Data

Unlink Data

Mark Group Start

Mark Group End

Remove From Group

Edit Wave Path

Test Menu

Play Sound

Stop Sound

Test SAN

Help Menu

[Index](#)

[About...](#)

New (File Menu)

The **New** menu item will start a new sound editing session. This command accomplishes this by saving and clearing any existing sound file in the session.

Close (File Menu)

The **Close** menu item will save and clear any existing sound file in the session.

Index (Help Menu)

This "index" option will show the table of content for the Sound Annotation Editor.

About (Help Menu)

This "About" option will show the logo for MediaShop's Sound Annotation Editor.

Title Bar

Main Menu Area

Wave Directory Path

Wave name and its directory path

Move Across - Horizontal Scroll Bar

Side movement of the wave.

