

INTERACTIVE ANIMATION

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Description

The Interactive Animation Control is a Custom Visual Basic Control that allows the user to gain access of the powerful animation capabilities of the Motion Tool animation engine. The following is the icon representing this control.



File Name

IANIM.VBX

Object Type

IAnim

Remarks

Currently the Interactive Animation Control will not allow the Visual Basic programmer to edit animation from within Visual Basic, thus the Motion Tool for Windows editing environment is required to assemble a complete animation for use by the control.

Properties and Events

Interaction with the Interactive Animation Control is via either PROPERTIES or EVENTS. Properties allow certain data to be sent to and retrieved from the animation engine (i.e. Animation file name, current frame number, etc.). Events allow the animation engine to notify Visual Basic of any changes.

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

PROPERTIES

There are a number of properties used to communicate between Interactive Animation and 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 used with it.

Properties

<u>*About</u>	Left
<u>*AnimFileName</u>	Name
<u>*AnimName</u>	Top
BackColor	Visible
BorderStyle	Width
Caption	<u>*SoundEnable</u>
Enabled	<u>*ReadOnly</u>
ForeColor	<u>*DelayUpdate</u>
Height	<u>*RunCursor</u>

RUN-TIME PROPERTIES

Run-time properties are hidden away from the general properties but can be used inside the Visual Basic program. The following categories of run-time properties are designed to form the animation process.

Run-time
general
animation
properties
Run-time
Character
properties
Run-time Cue
properties
Run-time Prop
properties
Run-time
Sound
properties

Run-time general animation properties

Properties in this category are used to control the overall animation such as playing the animation and sizing the active window. Asterisk(*) denotes properties that apply to this control only or that require special consideration when used with it.

*Flags

*CurrentFrame

*WindHandle

*MaxFrame

*Play

*Direction

*Loop

*Speed

*WindowHeight

*WindowLeft

*WindowTop

*WindowWidth

Run-time Character properties

Properties in this category consist of all the character or actor controls.

Asterisk(*) denotes properties that apply to this control only or that require special consideration when used with it.

*CharCount

*ListCharNames

*ListCharActor

*ListCharPath

*ListCharSeq

*ListCharEnable

*ListCharStart

*ListCharEnd

*ListCharX

*ListCharY

Run-time Cue properties

Properties in this category consist of all the Cue controls. Asterisk(*) denotes properties that apply to this control only or that require special consideration when used with it.

*CueCount

*ListCueNames

*ListCueEnable

*ListCueStart

*ListCueEnd

Run-time Prop properties

Properties in this category consist of all the Prop controls. Asterisk(*) denotes properties that apply to this control only or that require special consideration when used with it.

<u>*PropCount</u>	<u>*ListPropEntLeft</u>	<u>*ListPropExtRight</u>
<u>*ListPropNames</u>	<u>*ListPropEntTop</u>	<u>*ListPropExtBottom</u>
<u>*ListPropDIB</u>	<u>*ListPropEntRight</u>	<u>*ListPropShowLeft</u>
<u>*ListPropEnable</u>	<u>*ListPropEntBottom</u>	<u>*ListPropShowTop</u>
<u>*ListPropStart</u>	<u>*ListPropExtMethod</u>	<u>*ListPropShowRight</u>
<u>*ListPropEnd</u>	<u>*ListPropExtSpeed</u>	<u>*ListPropShowBottom</u>
<u>*ListPropEntMethod</u>	<u>*ListPropExtSteps</u>	
<u>*ListPropEntSpeed</u>	<u>*ListPropExtLeft</u>	
<u>*ListPropEntSteps</u>	<u>*ListPropExtTop</u>	

Run-time Sound properties

Properties in this category consist of all the sound controls. Asterisk(*) denotes properties that apply to this control only or that require special consideration when used with it.

*ListSoundCount

*ListSoundData

*ListSoundStart

*ListSoundNames

*ListSoundEnable

*ListSoundEnd

EVENTS

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

Events

<u>*ClickIn</u>	<u>*ClickOut</u>
<u>*CurFrame</u>	<u>*Play</u>
<u>*ObjMouseDblClk</u>	<u>*Direction</u>
<u>*ObjMouseDown</u>	<u>*Loop</u>
<u>*ObjMouseMove</u>	<u>*Load</u>
<u>*ObjMouseUp</u>	
<u>*SoundEnable</u>	
<u>*Unload</u>	

About Property

Description	Displays an About box for the control which contains the name of the control, and the version number.
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

AnimFileName Property

Description	Provides the path and name of the animation file loaded currently.
Visual Basic	[form.]IAnim.AnimFileName[=filename\$]
Remarks	Setting this property will close the current animation and file (if any) and open the specified animation file.
Data Type	String

AnimName Property

Description	Provides the name of the animation loaded currently.
Visual Basic	[form.]!Anim.AnimName[=name\$]
Remarks	Setting this property will close the current animation and file (if any) and open the specified animation.
Data Type	String

SoundEnable Property

Description Indicates whether the sound is enabled or disabled.

Visual Basic [form.]!Anim.SoundEnable[=setting%]

Remarks

Setting

TRUE (1)

FALSE (0)

Descriptions

Enable

Disable

Data Type Integer

ReadOnly Property

Description Specify if the animation engine can enter into an editing mode.

Visual Basic [form.]IAnim.ReadOnly[=setting%]

Remarks Currently, a .TMP file is created in the same directory as the source .MWF file. On a CD-ROM this would cause an error. Setting the Read only property to 1 would prevent the creation of a TMP file.

<u>Setting</u>	<u>Descriptions</u>
TRUE (1)	Activate ReadOnly Mode
FALSE(0)	(Default) Edit Mode

Data Type Integer

DelayUpdate Property

Description Delay the redrawing of an animation object.

Visual Basic [form.]IAnim.DelayUpdate[=setting%]

Remarks Changes made to an object in the animation (ie actor or prop) are delayed until the DelayUpdate property is set to False. Delaying the update allows an object to be moved smoothly under program control.

Setting

TRUE (1)

FALSE (0)

Descriptions

Activate DelayUpdate

Update immediately

Data Type Integer

RunCursor Property

Description Specify the run-time cursor for the animation engine.

Visual Basic [form.]IAnim.RunCursor[=setting%]

Remarks The following are the various cursor settings included with the animation engine.

List of Built-In Cursors:

Cursor Resource Name	Logical Cursor Number	Windows Built-In Cursors Label Name
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	FINGER_CURSOR	
	HAND_CURSOR	
	HANDUP_CURSOR	1
	HANDLEFT_CURSOR	2
	HANDRGHT_CURSOR	3
	HANDWALK_CURSOR	4
	HANDGRAB_CURSOR	5
	MAGNIFY_CURSOR	6
	QUESTION_CURSOR	7
	SOUND_CURSOR	8
	10000	IDC_ARROW
	10001	IDC_IBEAM
	10002	IDC_WAIT
	10004	
	IDC_UPARROW	
	10005	IDC_SIZE
	10006	IDC_ICON
	10007	
	IDC_SIZENWSE	
	10008	
	IDC_SIZENESW	
	10009	IDC_SIZEWE
	10010	IDC_SIZENS

Data Type Integer

RUN-TIME GENERAL ANIMATION PROPERTIES

Name	Data Type	Description
WindHandle	integer	Contains the window handle of the animation engine's window. This value is read-only and is available only during run-time.
Flags	integer (LONG)	Contains the flags of the animation engine. Refer to the Motion Tool for Windows API documentation for a list of the animation flags.
WindowLeft	integer	Contains the internal representation of the left position of the animation window. Measurement is in Pixels
WindowTop	integer	Contains the internal representation of the top position of the animation window. Measurement is in Pixels
WindowWidth	integer	Contains the internal representation of the width of the animation window. Measurement is in Pixels
WindowHeight	integer	Contains the internal representation of the height of the animation window. Measurement is in Pixels
Speed	integer	Contains the speed setting of the animation window in frames per second. (Range:1-18)
Play	integer (Boolean)	Indicates if the animation is playing.
Direction	integer (Enumerated)	Indicates the play direction of the animation.
Loop	integer (Boolean)	Indicates if the animation will loop to the beginning when the end is reached.
CurFrame	integer	Indicates the current frame of the animation.
MaxFrame	integer	Indicates the maximum number of frames in the current animation.

RUN-TIME CHARACTER PROPERTIES

CharCount	integer	Contains the count of the number of Characters in the current animation. This number is used to reference the array properties listed below. The array indices cannot exceed this value or an error will occur. Read-only.
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The following properties are array properties. Within Visual Basic, the array properties are accessed via the use of a subscript following the property name. The subscript indicates the Nth item in the array. In the case of the Interactive Animation Control indicates the Nth Character in the animation. Thus ListCharNames(5) would refer to the name of the 5th character in the current animation.

ListCharNames	string	Contains the name of the Character referred to by the index.
ListCharActor	string	Contains the name of the Character used in the specified Character.
ListCharPath	string	Contains the name of the Path used in the specified Character.
ListCharSeq	string	Contains the name of the Sequence used in the specified Character.
ListCharEnable	string (Boolean)	Indicates if the specified Character is visible.
ListCharStart	integer	Indicates the start frame number of the specified Character.
ListCharEnd	integer	Indicates the end frame number of the specified Character.
ListCharX	integer	Indicates the starting X position of the specified Character.
ListCharY	integer	Indicates the start Y Position of the specified Character.

RUN-TIME CUE PROPERTIES

CueCount	integer	Contains the count of the number of Cues in the current animation. This number is used to reference the array properties listed below. The array indices cannot exceed this value or an error will occur. Read-only.
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The following properties are array properties. Within Visual Basic, the array properties are accessed via the use of a subscript following the property name. The subscript indicates the Nth item in the array. In the case of the Interactive Animation Control indicates the Nth Cue in the animation. Thus ListCueNames(5) would refer to the name of the 5th cue in the current animation.

ListCueNames	string	Contains the name of the Cue referred to by the index.
ListCueEnable	string (Boolean)	Indicates if the specified Cue is enabled.
ListCueStart	integer	Indicates the start frame number of the specified Cue.
ListCueEnd	integer	Indicates the end frame number of the specified Cue.

RUN-TIME PROP PROPERTIES

PropCount	integer	Contains the count of the number of Props in the current animation. This number is used to reference the array properties listed below. The array indices cannot exceed this value or an error will occur. Read-only.
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The following properties are array properties. Within Visual Basic the array properties are accessed via the use of a subscript following the property name. The subscript indicates the Nth item in the array. In the case of the Interactive Animation Control indicates the Nth Prop in the animation. Thus ListPropNames(5) would refer to the name of the 5th prop in the current animation.

ListPropNames	string	Contains the name of the Prop referred to by the index.
ListPropDIB	string	Contains the name of the DIB used by the specified Prop.
ListPropEnable	integer (Boolean)	Indicates if the specified Prop is visible.
ListPropStart	integer	Indicates the start frame number of the specified Prop.
ListPropEnd	integer	Indicates the end frame number of the specified Prop.
ListPropEntMethod	integer	Indicates the Entry Transition Type of the specified Prop.
ListPropEntSpeed	integer	Indicates the Entry Transition's Speed. This value specifies the delay between steps of the animation. Thus a value of 1 would indicate a delay of 1 second between steps in the transition.
ListPropEntSteps	integer	Indicates the Entry Transition Steps. This value specifies how many steps the transition takes to complete.
ListPropEntLeft	integer	Indicates the Entry Transition Rectangle's left position.
ListPropEntTop	integer	Indicates the Entry Transition Rectangle's top position.
ListPropEntRight	integer	Indicates the Entry Transition Rectangle's right position.
ListPropEntBottom	integer	Indicates the Entry Transition Rectangle's bottom position.
ListPropExtMethod	integer	Indicates the Exit Transition Type of the specified

Prop.

ListPropExtSpeed	integer	Indicates the Exit Transition's Speed. This value specifies the delay between steps of the animation. Thus a value of 1 would indicate a delay of 1 second between steps in the transition.
ListPropExtSteps	integer	Indicates the Exit Transition Steps. This value specifies how many steps the transition takes to complete.
ListPropExtLeft	integer	Indicates the Exit Transition Rectangle's left position.
ListPropExtTop	integer	Indicates the Exit Transition Rectangle's top position.
ListPropExtRight	integer	Indicates the Exit Transition Rectangle's right position.
ListPropExtBottom	integer	Indicates the Exit Transition Rectangle's bottom position.
ListPropShowLeft	integer	Indicates the Show Rectangle's left position.
ListPropShowTop	integer	Indicates the Show Rectangle's top position.
ListPropShowRight	integer	Indicates the Show Rectangle's right position.
ListPropShowBottom	integer	Indicates the Show Rectangle's bottom position.

RUN-TIME SOUND PROPERTIES

SoundCount	integer	Contains the count of the number of Sounds in the current animation. This number is used to reference the array properties listed below. The array indices cannot exceed this value or an error will occur. Read-only.
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The following properties are array properties. Within Visual Basic, the array properties are accessed via the use of a subscript following the property name. The subscript indicates the Nth item in the array. In the case of the Interactive Animation Control indicates the Nth Sound in the animation. Thus ListSoundNames(5) would refer to the name of the 5th sound in the current animation.

ListSoundNames	string	Contains the name of the Sound referred to by the index.
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ListSoundData	string	Contains the name of the specified Sound's data. (WAVE or MIDI)
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ListSoundEnable	integer (Boolean)	Indicates if the specified Sound is played.
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ListSoundStart	integer	Indicates the start frame number of the specified Sound.
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ListSoundEnd	integer	Indicates the end frame number of the specified Sound.
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ClickIn Event

Description Notifies Visual Basic that a click was detected within the Interactive Animation Control.

Visual Basic **Sub** *IAnim_ClickIn* ()

Remarks Parameters: X As Single, Y As Single, Caption As String

ClickOut Event

Description	Notifies Visual Basic that a click was detected outside the Interactive Animation Control.
Visual Basic	Sub <i>IAnim_ClickOut</i> ()
Remarks	Parameters: None

Unload Event

Description	Notifies Visual Basic that the current animation (if any) has been closed. This indicates that the run-time variables are no longer valid.
Visual Basic	Sub <i>IAnim_Unload</i> ()
Remarks	Parameters: None

CurFrame Event

Description	Notifies Visual Basic that the current frame of the animation within the Interactive Animation Control has changed.
Visual Basic	Sub <i>IAnim_CurFrame</i> ()
Remarks	Parameters: None

ObjMouseDbIClk Event

Description	Notifies Visual Basic that a double click was detected within the Interactive Animation Control. The object's type and name is returned.
Visual Basic	Sub <i>IAnim_ObjMouseDbIClk</i> ()
Remarks	Parameters: ObjectType As Integer, ObjectIndex As String

ObjMouseDown Event

Description	Notifies Visual Basic that a mouse down was detected within the Interactive Animation Control. The object's type and name is returned
Visual Basic	Sub IAnim_ObjMouseDown ()
Remarks	Parameters: ObjectType As Integer, ObjectIndex As String

ObjMouseMove Event

Description Notifies Visual Basic that the mouse pointer has moved within an object within the Interactive Animation Control. The object's type and name is returned.

Visual Basic **Sub** *IAnim_ObjMouseMove* ()

Remarks Parameters: ObjectType As Integer, ObjectIndex As String

ObjMouseUp Event

Description	Notifies Visual Basic that a mouse up was detected within the Interactive Animation Control. The object's type and name is returned.
Visual Basic	Sub <i>IAnim_ObjMouseUp</i> ()
Remarks	Parameters: ObjectType As Integer, ObjectIndex As String

Load Event

Description	Notifies Visual Basic that an animation has been loaded. This indicates that the run-timer only properties are now valid.
Visual Basic	Sub <i>IAnim_Load</i> ()
Remarks	Parameters: None

Play Event

Description	Notifies Visual Basic that the Play status of the Interactive Animation Control has changed
Visual Basic	Sub <i>IAnim_Play</i> ()
Remarks	Parameters: Playing As Integer
