

DBTTip v1.24 July 1995

Description	The DBTTip control is used to create small pop-up windows typically containing a short descriptive text regarding the control over which the mouse cursor is currently located.		
File Name	DBTTIP.VBX		
Object Type	DBTTip		
Remarks	Unlike most other tool tips, DBTTips don't have to be rectangles. Instead, Windows Meta Files are used as backgrounds. With DBTTip, tool tips can be implemented without writing a single line of code! Refer to the <i>quick start</i> section to see just how easy it is to use DBTTip.		
About	This control was developed by Dan Byström. For more information, contact me at e-mail: "dan.bystrom@adb-partner.se", phone: +46 708 68 65 78 (no support calls, please) or fax: +46 457 274 81. I would be happy to discuss development of customized VBX'es or OCX'es for you.		
Distribution	You have the right to do whatever you want with DBTTip, <i>as long as you don't attempt to modify any of its code</i> . "Do whatever you want" includes using DBTTip in your own commercial applications and/or distributing it for free. When the control is loaded in design mode a message is sometimes displayed. <i>This message may not be removed or changed in any way</i> . Anyway, the message won't ever appear at run-time. I'm giving DBTTip away for free. If you should decide to use it in an application of yours, this means that I have saved you a whole lot of trouble, time and \$\$\$ doing it yourself. Therefore I think a nice gesture would be to include some sort of credit in your application's about box and/or documentation. You could include the name of the VBX, my name and my e-mail address. I would be glad if you did this. Anyway - happy VB programming with DBTTip!		
Revision history	Feb 95: Beta release. v0.9: DBTTip now handles irregular shaped graphical controls. v1.0: New property added: <i>Sensivity</i> . v1.1: New property added: <i>UseIndex</i> . v1.2: BUGFIX: Unloading a control while it was tipped could cause GP-fault. New event added: <i>PopDown</i> . New feature: Invisible tool tips! v1.21: BUGFIX: The tip now stays on top of forms made topmost. v1.22: A space of two pixels on each side of the tool tip text has been added. The tool tip text may now contain double pipe characters meaning CRLF. v1.23: The tip cannot popup in break (debug) mode. BUGFIX: A control on a minimized form could get tipped. v1.24: Max tool tip text length increased to 1200 characters. The screen area under the tool tip is saved - no repaint is needed.		

Properties

*Alignment	*Aspect	*Delay	*ExtraOffX
*ExtraOffY	FontBold	FontItalic	FontName

FontSize	FontStrikethru	FontUnderline	ForeColor
*HotSpotX	*HotSpotY	Index	*IsVisible
*MouseOffX	*MouseOffY	Name	Parent
*Picture	*PopupMode	*Sensitivity	Tag
*TextBottom	*TextLeft	*TextRight	*TextTop
*TractorBeam	*UseIndex		

* = The property applies only to DBTTip.

Events

*PopDown *Popup

* = The event applies only to DBTTip.

Alignment Property

Description Determines the alignment of the tool tip text.

Remarks The *Alignment* property settings are:

Setting	Description
0	The caption text appears left-justified.
1	The caption text appears right-justified.
2	(Default) The caption text appears (horizontally) centered.

Data Type Integer (enumerated)

Aspect Property

Description Determines the aspect ratio between the text box' width and height, multiplied by 10.

Remarks A setting of 10 means that the text box within the tool tip will have approximately the same width as height. A setting of 20 means it will have twice the width as height.

Data Type Integer

DBTTipVersion Function

Description This function may be used to investigate the version of the system's DBTTIP.VBX and supplying the user with an appropriate error message if an old version is found.

Remarks The major version number is returned in the high byte and the minor version number is returned in the low byte. For an example, refer to the last section of this document.

Data Type Integer

Delay Property

Description Determines the delay in ms the mouse must have been parked (immobile) before DBTTip starts searching for a control and generates a *Popup* event.

Data Type Integer

ExtraOffX & ExtraOffY Properties

Description During the processing of the *Popup* event, these properties may be set, in order to move the tool tip window into a different position, not necessarily related to the mouse position.

Remarks These properties are given in pixels and are added to the *MouseOffX* & *MouseOffY* property values, respectively. These properties are reset to zero each time the tool tip window is removed from the screen.

Data Type Integer

HotSpotX & HotSpotY Properties

Description Determines the position of the picture's logical hot spot. These properties, in conjunction with the *MouseOffX* & *MouseOffY* properties, define exactly where the tool tip will pop up with respect to the mouse cursor.

Remarks These properties are given in percentage of the picture where (0,0) means the upper left corner and (100,100) means the lower right corner.

Data Type Integer

IsVisible Property

Description Determines or sets the tool tip window 's visible state.

Remarks It is possible to remove a tool tip by setting *IsVisible* to *False*. It is also possible to simulate the mouse being parked by setting *IsVisible* to *True*. If the mouse isn't over a VB control, however, nothing happens. This may be used in conjunction with the *PopupMode* property in order to create a manual pop-up mechanism.

Data Type Integer (Boolean)

MouseOffX & MouseOffY Properties

Description Determines the offset between the mouse cursor and the tool tip's hot spot. These properties, in conjunction with the *HotSpotX* & *HotSpotY* properties, defines exactly where the tool tip will pop up with respect to the mouse cursor.

Remarks These properties are given in pixels. A value of (0,-10) means ten pixels straight above the mouse cursor.

Data Type Integer

Picture Property

Description Determines the picture to be used as the tool tip's background.

Remarks This property *must* be loaded with a picture, otherwise *nothing* is displayed. Only Windows Meta Files (WMF) may be used. This is because WMFs may be resized with no loss of quality and the tool tip must be resized for each text it displays. Another reason is that they don't have to be rectangular.

Data Type Picture

PopupMode Property

Description This property is used to turn off the automatic tracking of the mouse. If set to manual, the tip will only pop-up in response to the *IsVisible* property.

Remarks The *PopupMode* property settings are:

Setting	Description
0	(Default) Automatic. DBTip tracks the mouse continuously by keeping a 50 ms timer running.
1	Manual. The timer only starts when <i>IsVisible</i> is set to <i>True</i> and stops when the tip is removed (or if the pop-up fails in the first place, which happens if: the mouse isn't above any control or if the <i>Popup</i> event returns an empty string).

If it for some reason is desirable to have multiple DBTTips in an application, it may be better to use the manual pop-up mode (to avoid competition between the DBTTips and wasting precious timer resources). All but the desired DBTip may then have their *PopupMode* set to manual in response to a control's *MouseMove* event.

Data Type Integer (enumerated)

Sensivity Property

Description Determines the distance (in pixels) which the mouse may be moved and still be considered parked (immobile) above a control.

Data Type Integer

TextBottom, TextLeft, TextRight & TextTop Properties

Description Determines the area within the tool tip where text may be drawn. The appropriate setting of these values depend on the shape of the picture used.

Remarks These properties are given in percentage of the picture where (0,0) means the upper left corner and (100,100) means the lower right corner.

Data Type Integer

TractorBeam Property

Description This property may be used to make the tool tip follow the mouse cursor while it moves over a control.

Remarks The value of the property is the distance in pixels which the mouse is allowed to move before the tip follows. A value of zero turns off this feature.

Data Type Integer

PopDown Event

Description Occurs when a tool tip gets removed from the screen.

Sub *DBTTip_PopDown* ()

Remarks The *UseIndex* property is still valid when this event occurs.

Popup Event

Description Occurs before the tool tip pops up. This event is triggered each time the mouse has been parked for at least *Delay* ms above a VB control (if the automatic tracking hasn't been disabled with the *PopupMode* property, that is).

Sub *DBTTip_Popup* (*CtlName* As String, *CtlIndex* As Integer,
hWnd As Integer, *strText* As String,
X As Single, *Y* As Single)

Remarks	<table border="0"> <tr> <td style="vertical-align: top;"><u>Parameter</u></td> <td style="vertical-align: top;"><u>Meaning</u></td> </tr> <tr> <td><i>CtlName</i></td> <td>The name of the control being tipped.</td> </tr> <tr> <td><i>CtlIndex</i></td> <td>The index of the control being tipped (to be used if the control belongs to a property array).</td> </tr> <tr> <td><i>hWnd</i></td> <td>The hWnd of the control being tipped (this parameter is zero for graphical controls).</td> </tr> <tr> <td><i>strText</i></td> <td>The desired tool tip text. If the control has a standard <i>Tag</i> property beginning with the text "DBTTip:", the rest of the <i>Tag</i> property will be in <i>strText</i> when <i>Popup</i> is called. If all controls have their <i>Tag</i> properties set correctly - no code is needed! Setting <i>strText</i> to an empty string cancels the pop-up. Any appearance of " " (double pipe characters) in <i>strText</i> will be replaced by CR/LF.</td> </tr> <tr> <td><i>X & Y</i></td> <td>The mouse coordinates in twips, relative to the control. These parameters may be used in conjunction with the <i>ExtraOffX</i> and <i>ExtraOffY</i> properties to calculate a different pop-up location for the tool tip window.</td> </tr> </table>	<u>Parameter</u>	<u>Meaning</u>	<i>CtlName</i>	The name of the control being tipped.	<i>CtlIndex</i>	The index of the control being tipped (to be used if the control belongs to a property array).	<i>hWnd</i>	The hWnd of the control being tipped (this parameter is zero for graphical controls).	<i>strText</i>	The desired tool tip text. If the control has a standard <i>Tag</i> property beginning with the text "DBTTip:", the rest of the <i>Tag</i> property will be in <i>strText</i> when <i>Popup</i> is called. If all controls have their <i>Tag</i> properties set correctly - no code is needed! Setting <i>strText</i> to an empty string cancels the pop-up. Any appearance of " " (double pipe characters) in <i>strText</i> will be replaced by CR/LF.	<i>X & Y</i>	The mouse coordinates in twips, relative to the control. These parameters may be used in conjunction with the <i>ExtraOffX</i> and <i>ExtraOffY</i> properties to calculate a different pop-up location for the tool tip window.
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No new event will be triggered (automatically) before the mouse is moved outside the control and the tool tip has been removed. It is possible to trigger this event manually by setting the property *IsVisible* to *True*.

UseIndex Property

Description This property is used to select which DBTTip (out of a control array) that shall be used in conjunction with a particular control. Refer to the section "Multiple shapes, fonts and colors" for more information.

Remarks Before a *Popup* event, this property is set to the DBTTip index number specified in a control's *Tag* property. I.e. a tag containing "DBTTip2:A tool tip text" results in *UseIndex* = 2. This value may be changed during the *Popup* event.

Data Type Integer

Usage in design mode

The appearance of the tool tip in design mode is quite different than at run-time. Below is a typical scenario.

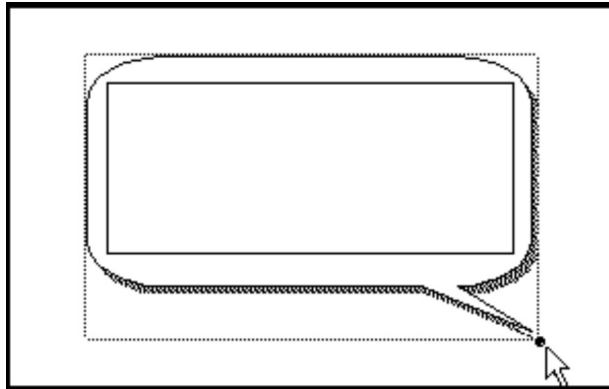


Fig 1: Appearance of DBTTip in design mode.

In design mode, the background of the tool tip is always white with a black border. The picture is bounded by a dotted rectangle. The reason for the area between the dotted rectangle and the border is to display a mouse cursor in order to give a visual representation of the *MouseOffX* and *MouseOffY* properties. The hot spot is indicated by a small red circle. The text surface area (the *TextBottom*, *TextLeft*, *TextRight* & *TextTop* properties) is visualized by a white frame within a black frame. No text is ever shown in design mode. The size of the tool tip in design mode is unimportant.

The tool tip text of each control may also be determined in design mode, just add the tool tip text to the controls *Tag* properties, prefixed with the text "DBTTip:".

Usage at run-time

Whenever the mouse is being parked at the same position for *Delay* ms, DBTTip investigates if it is parked over a VB control. If it is, the *Popup* event is fired. If the *strText* argument to the *Popup* event contains text on return, the tool tip pops up. As soon as the mouse moves away from the control, the tool tip is removed.

Note 1: DBTTip operates application-wide! There is no need to include a tool tip in more than one form. In order to have multiple tool tips in an application, make sure that no more than one is enabled at the same time.

Note 2: It is only necessary to add code to the *Popup* event if the default behavior must be overridden in some way. Under normal circumstances, no code is needed!

Quick start

To summarize, below are the steps necessary to bring tool tips to your application. Note that steps 1-5 need only be done *once* in an application. Later on, you may skip these steps by copy-and-paste a DBTTip from a previous application of yours (or from the demo supplied with DBTTip).

1. Load or paste an appropriate background picture into the *Picture* property. The easiest way may be to select a predefined shape in Microsoft PowerPoint and copy-and-paste it.
2. Adjust the properties *TextLeft*, *TextTop*, *TextRight* and *TextBottom* to get the black/white frame to surround the area of the picture which will contain text.
3. Adjust the *HotSpotX* and *HotSpotY* properties so that the little red circle is moved

- into the logical hot spot position of the picture.
4. Adjust the *MouseOffX* and *MouseOffY* properties to move the picture of the cursor relative the hot spot. Now the pop-up location of the tool tip has been exactly determined (unless overridden later by application code).
 5. Give the *Delay* property a reasonable value, say 1000 ms.
 6. Finally, add the desired tool tip text of each control to its *Tag* property, respectively, and prefix it with the text "DBTTip:", like this: "DBTTip:Beam me up, Scotty!". (Don't type the quotation marks!)

Multiple shapes, fonts and colors

This section describes the new feature of DBTTip v1.1: the ability to use different DBTTip properties (like the background shape) for different controls, without any coding and without having any extra timers running. Just follow these steps:

1. Make a control array of DBTTips, each setup like described in the "Quick start" section and then change the *PopupMode* property to "1 - Manual" in each but the first (*Index zero*) DBTTip.
2. Tag the controls to be tipped with "DBTTip*NN*:", where *NN* is the index number of the DBTTip containing the desired configuration. (The tag "DBTTip:" is interpreted as "DBTTip0:".)

That's all there is to it! It is possible to yield even more control by investigating and/or altering the *UseIndex* property during the *Popup* event. It is loaded with the *NN* value before each *Popup* event.

One caveat: The *Delay* property is not unique for each DBTTip, only the value of the first DBTTip is used.

Invisible tool tips

If the *UseIndex* property refers to a non-existing DBTTip, nothing will be displayed on the screen. But the *PopDown* event will still be executed as usual when the mouse gets removed from the control. Because of this, advantage may be taken of DBTTip's tracking feature. In particular, DBTTip tracks movements above a disabled control, this would otherwise be a tricky task.

What's up, Doc?

The source code for the tool tip window itself is included in the file TIPWND.C, if anyone should want to know what that little obscure thing is made up of. (It's a quite normal window, the source should prove just that.)

When the tool tip is up, the mouse is captured by DBTTip. Mouse messages are *sent* to the underlying control (if it's enabled, that is) by DBTTip while this happens. If DBTTip for some reason loses the capture, the tool tip is removed.

Version control

The following code shows an easy way to check the version of DBTTIP.VBX before it is accessed by VB. In a global module, put the following declaration:


```
Declare Function DBTTipVersion Lib "dbttip.vbx" () As Integer
```

Then use a Sub Main() as your program's entry point:

```
Sub Main()  
  If DBTTipVersion() < &H124& Then  
    MsgBox "Your DBTTIP.VBX is too old for this program!", 16  
  End  
End If  
'Load your main form here  
End Sub
```

----- End of text -----