

## Notes for REALbasic 2009 Release 4

### 97 Bug Fixes

- Method names/view properties are now saved in VCP projects in sorted order.
- Pasting text into the Code Editor strips low ascii characters that can cause issues.
- Some issues with the create missing method assistant should be resolved.
- Changing time zones no longer causes the IDE to need to be re-authenticated.
- Projects with attributes are now loaded properly instead of being deleted.
- An issue where the constant editor would not retain changes has been fixed.
- The REALbasic About box now closes when pressing CMD-W or ESC on Mac OS X and when using CTRL-W on Windows / Linux.
- A NilObjectException in Menus.AddToContainedMenu when the menu has no items in it has been fixed.
- Windows: A TextField on a ContainerControl now honors its textcolor and backcolor properties.
- Mac OS X: A disabled TextArea or TextField now hides its selection.
- An issue in the SMTPSocket and SMTPSecureSocket that could result in authentications being mishandled has been fixed.
- Windows: Setting the TextField.Password at runtime now updates the TextField properly instead of requiring a refresh before the change takes affect.
- Cloning controls in nested ContainerControls now works properly.
- A bug that occurred where copying and pasting a computed property would mistakenly add a default value which is syntactically invalid, has been fixed.
- BevelButtons with the No Bevel type no longer over draws on Vista.
- Windows: TextField Alignment property now works properly.
- Windows: The backspace/delete keys now function again in Method Name Combobox in the IDE.
- Compiler no longer throws an assertion when a name of a control is invalid, it now reports it as a compile error.
- Mac OS X: Debugger now shows listbox RowTag values in the IDE.
- Search Results editor now shows the name of the window for results involving icons and images that were searched for by name.
- Localization files (i.e. the .mo files in the Resources folder) are now recreated when building for Windows or Linux.
- An issue with the project item contextual menu not showing all possible sub menus has been resolved.
- An exception in the Search Results Editor when searching classes that had their super class adjusted via the Issue Resolution dialog has been fixed.

- ListBox.ActiveCell now returns TextField instead of an Editfield.
- Toolbars and toolitems are now part of search results.
- Mac OS X: ComboBox now auto scrolls to the left when it loses focus.
- Object2D.RoundRectShape now draws its border properly when the graphics context is clipped.
- Linux: ComboBox control autocomplete now works.
- SSLSocket no longer scrambles data or crashes randomly when reading data. This also affected HTTPSecureSocket which is based off of SSLSocket.
- A recoverable assertion has been disabled as the issue is being recovered from without user intervention.
- Windows: BevelButtons now draws using the Visual Theme, this makes the BevelType obsolete except for "No Bevel" which still draws like before.
- ActiveX controls now load properly for RBP/XML project formats, and is now supported properly in RBVCP project formats.
- Activation dialog buttons are now sized properly for localization.
- Linux: SelectColor now uses the color supplied as the default color instead of pure white.
- Windows: Calling MsgBox with Retry, Abort, or Ignore buttons and clicking on one of them no longer causes a failed assertion.
- Subclass constructors no longer add a call to Super.Constructor when duplicating the constructor.
- Print menu item now has the full name of the item being printed in the menu. It used to only have a partial path. Also the printed output now displays the full path to the item.
- Removed CancelClose event from ContainerControl since it's never triggered and was never supposed to be exposed.
- Linux: ListBox.CellHelpTag now works.
- Windows: Setting a progressbar to be indeterminant (i.e. setting the Maximum value to 0) now works even when the progressbar is not visible.
- Mac OS X: SpecialFolder.Cookies now maps to User:Library:Cookies.
- Object2Ds now draw properly in a clipped graphics context.
- VCP projects that have properties with attributes no longer lose their scope information.
- An occasional NilObjectException while cleaning up temporary files has been fixed.
- The REALbasic IDE no longer throws an OutofBoundsException when loading projects with corrupt ListBox properties.
- Plugin SDK: REALGetRBVersion now reports the correct version of REALbasic instead of always 2008.05.

- The Code Editor no longer thinks that any comment with a colon in it is a URI. The only valid URIs are: ftp(s)://, http(s)://, rb-feedback://, feedback://, mailto:emailaddress.
- When saving a project, an issue where the file extension and the value in the file type popup in the Save As dialog box could be different has been resolved. This corrects a problem where a project could be inadvertently overwritten with one of a different type.
- Windows: Object2D objects with a fill opacity less than 100 now render with translucency. This requires GDI+ be enabled, see the App.UseGDIPlus property.
- Windows: setting the TextField font and font size programmatically now works.
- White space at the end of a method name is stripped as it could cause a hard to find bug.
- Editing a destructor no longer shows parameters or return types as they would not compile anyway.
- IDE no longer crashes if you happen to drop a framework into the Project Editor.
- Removing a tab/page (from a TabPanel/PagePanel) in an event of a control that lives on that tab no longer crashes.
- An issue that was causing the REALbasic EULA to be presented too often upon launch has been fixed.
- Windows: Listbox.CellHelpTag no longer steals mouse clicks (i.e. clicks on a cell's HelpTag now fall through to the listbox instead of being handled by the HelpTag).
- Windows: setting the TextColor or BackColor of a TextField control now updates correctly instead of needing to trigger a Refresh.
- IDE scripts that build several projects and switch between them should no longer result in a hung IDE.
- VCP projects that have missing files will present a list of the missing files when the IDE finishes trying to load the project.
- The return value field is removed for when creating a method as a constructor.
- Windows: closing a ContainerControl in PushButton Action event no longer crashes.
- Fixing an editfield control array will correct the supers by considering all items in the control array. If one item is multiline then all items would need to be text areas to avoid casting errors at run time.
- Fixed a parsing bug that would trigger an unhandled exception when generating COM classes.
- Linux IDE: increased the height of the close button in the dialog that appears after the check for updates is finished.
- An issue that was causing ActiveX controls to crash on close has been fixed.
- Duplicating properties that have no default value will no longer set the default value of the new copy to 0.

- Running a project that is dirty no longer marks it as clean (not dirty).
- URI's that use schemes like mailto which do not require the :// work correctly now.
- Parenthesis matching in the Code Editor should be accurate now with a line of code like `theResult = NthField(theResult, "")`, 1)
- Linux: `TextField.CueText` now works.
- An issue with undoing changes while actively editing a textual property has been resolved.
- Windows: `TextField` now triggers `MouseDown` when clicking on non-client areas.
- An issue in the Build Settings dialog box that caused the default platform to be built when building a console application, has been fixed.
- Linux IDE: multiple copies of the IDE can now be run simultaneously.
- A nil object exception in the Window Editor has been fixed.
- IDE no longer gives a failed assertion when selecting "Define missing method" in the code editor's contextual menu.
- Fixed memory leaks related to object/string arrays in methods.
- Loading attributes for Window properties has been fixed.
- Properties that were supposed to be hidden that were being shown are now hidden again.
- Window width and height no longer show in scientific notation.
- Attributes are now copied when you duplicate a property.
- A cause of an out of bounds exception in the IDE tabs has been fixed.
- A cause of an `OutOfMemoryException` has been corrected in the Window Editor.
- Projects that contain localizable values are properly recognized when loading and the Export Localizable values menu item properly enables.
- Language reference now jumps to various block level statements correctly (`For/Next`, `Do/Loop` etc).
- A nil object exception that could occur when checking for updates has been fixed.
- The missing file count reported when loading a VCP format file that has missing files is correct - it had been off by one previously.
- The Open Recent menu updates properly again.
- The IDE will no longer allow properties and controls to have the same name as this is an error.
- Linux: The Options (Preferences) dialog shows the proper title on each panel again.
- Backcolor property now works for `TextField` and `TextArea` controls.

- An issue with loading VCP projects that contained properties with attributes has been fixed.
- Renaming modules no longer leaves contained items in the wrong directory. Detection of out of date files should be better as well.
- Canceling the selection of a default build folder will now cancel the build.
- Default pushbuttons no longer flash in the Window editor when resizing the window.
- An exception when using the contextual menu while the mouse is over the close icon has been fixed.
- An issue where an untyped constant in the Constants Editor could cause a project item to be marked dirty when it wasn't has been fixed.

### **39 New Features**

- The HTMLViewer on Linux now uses WebKit (if it's installed) to provide superior HTML rendering.
- BinaryStream now has Open and Create methods, both of which take a folderitem as a parameter. This provides a better design than opening or creating a stream via the FolderItem class.
- TextInputStream now has an Open method, which takes a folderitem as a parameter. This provides a better design than opening a stream via the FolderItem class.
- TextOutputStream now has a Create method, which takes a folderitem as a parameter. This provides a better design than opening a stream via the FolderItem class.
- New IOException class that allows you to catch exceptions (errors) when using the new BinaryStream.Open, BinaryStream.Create, TextOutputStream.Create and TextInputStream.Open methods.
- New TrayItem.Handle As Ptr property that returns the window handle that the tray item belongs to on Windows, and the GtkStatusIcon widget on Linux.
- The Icon Editor now separates the image and mask when you drop an image that has both on either the image or mask portion of the icon editor.
- New Tooltip class that allows you to show tooltips in any location you wish.
- New Report Editor allows you to create layouts visually for the purpose of printing. These layouts can be used to print data from any source.
- On Windows, Object2D can now draw edges more smoothly and supports translucency via support for GDI+. To use it, set App.GDIPlus to true.
- The Declare method can now be used in conjunction with a new graphics class handle type (HandleTypeGDIPlusGraphics) allowing you use features of GDI+ on Windows that REALbasic does not yet support (such as anti-aliasing).
- Text size for controls can now be set in pixels, points, inches or millimeters via the new TextUnit property.

- You can now change the text color of the caption of a BevelButton on Windows and Linux via the TextColor property.
- When you do a contextual click on a control in the Window Editor that you have subclassed, there is now an "Edit Superclass" menu item that will take you right to the code for the parent class.
- Duplicate is an available option in the project item editor contextual menu.
- The Shell class now allows you to indicate which language interpreter you wish to use.
- The BevelButton now has a BackColor property that allows you to set the background color and HasBackColor property for determining if a custom background color has been set. These properties are only supported for Windows and Linux.
- HTTPSocket & HTTPSecureSocket now support proxy server authentication via the ProxyAuthenticationRequired event.
- HTTPSocket & HTTPSecureSocket now support Digest authentication for both proxy and www authentication.
- When a control on a window needs to have its super class updated the name of the containing window, not its title, is shown in the Issue Resolution Window.
- Build progress now shows an additional message, Linking, when it has reached that point in the build process.
- The phase where the compiler strips out unused REALbasic code has been optimized so that it should run up to 300% faster. This is especially noticeable for projects with plugins with many functions where most are unused.
- The compiler now generates Objective-C exception handlers around Objective-C declares. If an Objective-C exception is raised due to the declare, it will be converted into a REALbasic ObjCException object and raised through the normal REALbasic exception system. ObjCException has a handle property, which allows you to get the underlying exception object (typically an instance of NSError).
- The Find Window now supports finding in a selection and find and replace all in a selection.
- A contextual click on the Stack popup menu in the Debugger now provides the option to copy the current position (the method name) in the stack or copy the entire stack (all method names) to the clipboard.
- The combobox in the method editor now shows the method name + parameters to make it more obvious you are selecting a full prototype and not just a name.
- Mac OS X: There is a new preference for how the Home and End keys should behave in the Code Editor.
- There is a new preference that allows you to choose which comment style the Comment button in the Code Editor should use.
- IDE search column widths are saved and restored. If you adjust the widths they will be preserved instead of being reset constantly.

- You can now automate the most common functions of building of your applications without having to write IDE scripts using the new Build Automation feature of the Project Editor. This feature is for the REAL Studio edition only.
- Find and Find All search value fields will be automatically be populated with the selected text from the front most Code Editor.
- It's now optional on Windows whether the IDE quits when the last window is closed. If you set it to NOT quit when the last window closes a tray item will be present and you can start a new project from it.
- Subclasses of container controls now draw the controls on them instead of just an outline.
- The Remote Debugger stub allows you to toggle whether it should / should not immediately launch a program upon unpacking the files it receives.
- The Convert to Constant contextual menu item in the Code Editor now will select the entire string even if the cursor is only within the string with no part of the string selected.
- Mac OS X: You can now specify the role your application fulfills for an accepted file type. Possible roles are Editor, Viewer, Shell and None. None is the default.
- List of missing files is reported in the console using system.debuglog as they are encountered while loading a VCP project.
- A new Feedback application has been created for providing us with bug reports and feature requests. It is available via the Help menu.

## 9 Changes

- The following plug-in API calls are no longer deprecated:  
REALGetControlBounds, REALGetControlPosition, REALSetControlPosition, REALGetControlVisible, REALSetControlVisible, REALGetControlEnabled, REALSetControlEnabled, REALGetControlHandle, REALGetControlWindow.
- Windows/Linux: now looks in "MyApplication Resources" for language files (where "MyApplication" is the name of the executable) and falls back on "Resources" if that folder is not available. This allows users to share a common folder with multiple RB executables that require resources.
- The TextSize property of the Graphics class and various RectControls have been updated to take a Single instead of an Integer. See also the TextUnit property to take advantage of this change.
- App.AddTrayItem now returns a boolean value that lets you know whether or not the tray item was added successfully.
- The Language Reference window in the IDE now uses WebKit on Linux if WebKit is installed. If not, the PDF version of the Language Reference will be opened instead.
- Folderitem.OpenAsTextFile, Folderitem.CreateTextFile, Folderitem.OpenBinaryStream, and Folderitem.CreateBinaryStream are deprecated. Use the new methods (described in the New section) above instead.

- Projects are added to the File -> Recent menu as they are closed not as they are opened. The last closed project/IDE script will be at the top of the list.
- The "Extract Method" contextual menu has been renamed "Convert to Method".
- The "Extract Constant" contextual menu has been renamed "Convert to Constant".