Clarion 9

What's new in Clarion 9

Over the summer a number of new blog posts appeared at http://clarionsharp.com pointing out new features in Clarion 9. These include:

- A new locator on the Applications Pad, useful when working with multi-app solutions.
- A new menu shortcut editor to let you redefine IDE main menu hotkeys.
- Dictionary editor search functionality (search through tables, columns, keys, relations, pool and global data). Complex searches are possible.
- One-prompt app file upgrading for multi-app solutions (so you don't have to answer the question for each app)
- Coloring support for list control headers and data.
- Search/replace in editor has a new option to limit the search to the current folder, which is the folder containing the currently active file. This may or may not be the same as the project folder.
- Customizable fonts for the AppGen and various IDE components such as dialogs, list controls, start page, and the text editor/output window.
- A filtered locator on the property grid, to make it easy to find any property.
- Report upgrades,including:
    - single file support for HTML reports
    - setting the first page number (ABC)
    - print current page menu item in previewer (ABC)
    - scan copy output mode for the PDF generator (creates PDF as an image rather than as text)
- New %libpath% macro in the Copy section of redirection files. This makes it easier to add .NET assembly projects to your Win32 solution.
- PROP:LowResourcesHook lets you add code to handle low system resource conditions.
- PROP:SQLRowSet allows calls that are not CALL or SELECT to return a result set.
- New Create and Fetch dictionary triggers
- New buttons to change the AppGen sort order, as well as Cancel Generation and Cancel Builds on the main IDE and Applications Pad toolbars.
- Template option to limit procedure to one instance (ABC)
- Template option to limit application to one instance (ABC and Clarion)
- FileCallBackInterface extended to allow an operation to be stopped without returning an error.
- Dictionary editor validation option to find errors in window and report control strings in dictionaries imported from earlier versions of Clarion.
- Option to force DLLs to be copied to the destination dictionary of the EXE using the LibAlwaysCopyList.xml configuration file. This is useful for LIBs created against non-Clarion DLLs as the DLL would otherwise not be copied.
- A new advanced view/layout in the Dictionary editor lets you see all file details in one combined view.
- SqlScriptor\SqlScriptor.app shows how to use the new SQL scripting class
- SQLite\School.app is the school.app modified for SQLite. It also imports the TPS data.
- There are a couple of hand coded projects to demonstrate creating and reading XML files. Here's the XMLParser example in action, reading a file created with the XMLGenerator example:

XML

Load XML | E:\Clarion.Installs\Clarion9.examples\Examples\XML\XMLParser\breakfast_m

Tree | Text

```
<?xml?>
├── version = 1.0
├── encoding = ISO-8859-1
⊟── <breakfast_menu>
    ⊟── <!-- The root tag is the first tag in the doc -->
        ⊟── <food>
            ├── recordNumber = 1
            ├── <name> VALUE:Belgian Waffles
            ├── <price> VALUE:$5.95
            ├── <description> VALUE:two of our famous Belgian Waffles with plenty of
            └── <calories> VALUE:650
        ⊟── <food>
            ├── recordNumber = 2
            ├── <name> VALUE:Strawberry Belgian Waffles
            ├── <price> VALUE:$7.95
            ├── <description> VALUE:light Belgian waffles covered with strawberries ar
            └── <calories> VALUE:900
```

Cancel

Third party products available for Clarion 9

Clarion 9 versions are available for the following products:

- AuraTek - Query Wizard - http://clariontools.com/index.php?option=com_staticxt&staticfile=qw6overview.htm (beta)
- BoxSoft - Super Templates - https://boxsoft.net/supertemplates.htm
- Brahn Partridge - Clarion IDE Addins - http://clarionaddins.com/
- Capesoft - http://www.capesoft.com/clarion
- Clarion FreeImage - http://clarionfreeimage.com
- Clarion Handy Tools - http://cwhandy.com/
- CPCS, RPM, AFE, PNET - http://www.cwaddons.com/
- Creative Reporting (formerly known as CPCS) - http://www.creativereporting.com/
- DMC - http://www.dmc-fr.com/
- Fomin Report Builder - http://www.fomintools.com/update.htm
- IceTips Utilities - http://www.icetips.com
- ImageEx - http://www.solidsoftware.de/imageex.htm (now with full source)
- IngaSoftPlus Data Conversion Template - http://www.ingasoftplus.com/ProductDetail.php?ProductID=259
- Keystone - http://www.keystonecr.com/ToolsForClarion/ToolsForClarionUpdates.aspx
- Klarisoft wPdfControlWrapper - http://www.klarisoft.com/KSNews_127.htm
- LANSRAD - http://www.lansrad.com/
- Lindersoft LsZip - http://www.lindersoft.com/products_lszip.htm
- Lindersoft SetupBuilder - http://lindersoft.com/
- Noyantis - http://noyantis.com
- ProDomus - http://prodomus.com/
- Robert Paresi - iQ-XML - http://paresi.net/clarion
- Valutilities - vuMail, vuFileTools and vuSendKeys - http://www.valutilities.com/vufiletools.htm

Clarion 9 Beta First Look

The first Clarion 9 beta has gone out to third party folks, at least in part to allow those vendors who ship binary code to get current releases out the door. The Clarion 9 RTL has changed enough that recompiles are required.

As with previous releases, the Clarion 9 IDE has undergone some UI changes. There's a new logo and the default blue backgrounds have been replaced with gray.
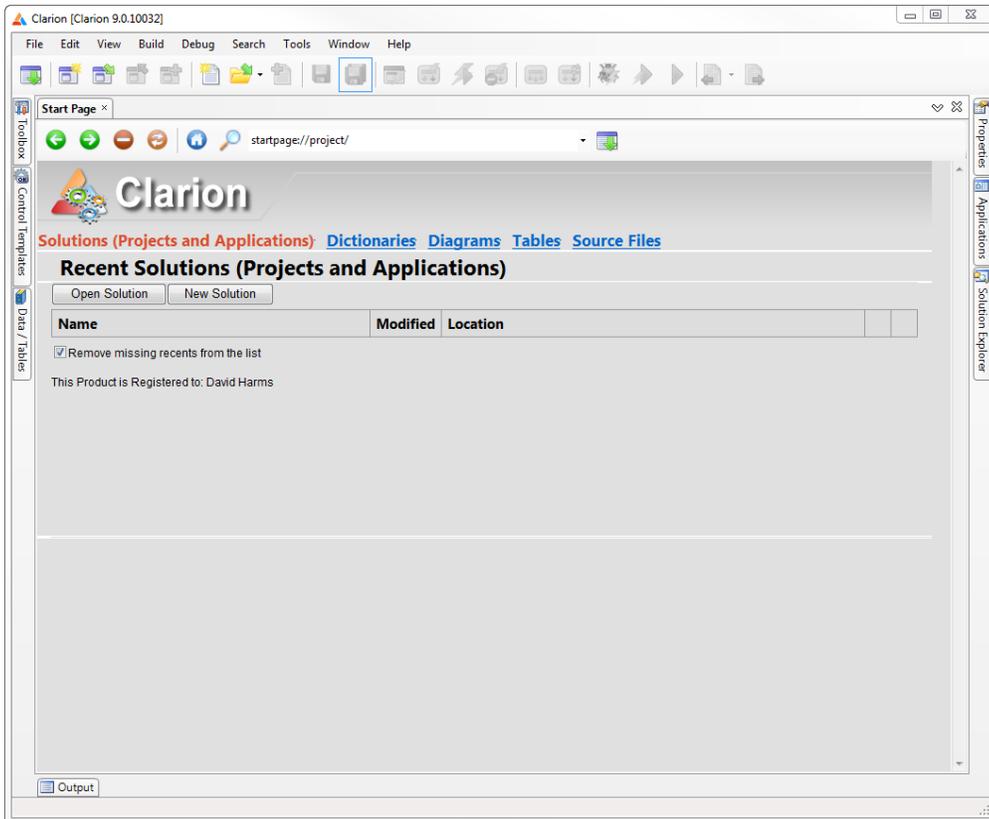

There are some new appearance options, which let you select one of several default color schemes for the IDE. You can also create custom schemes.
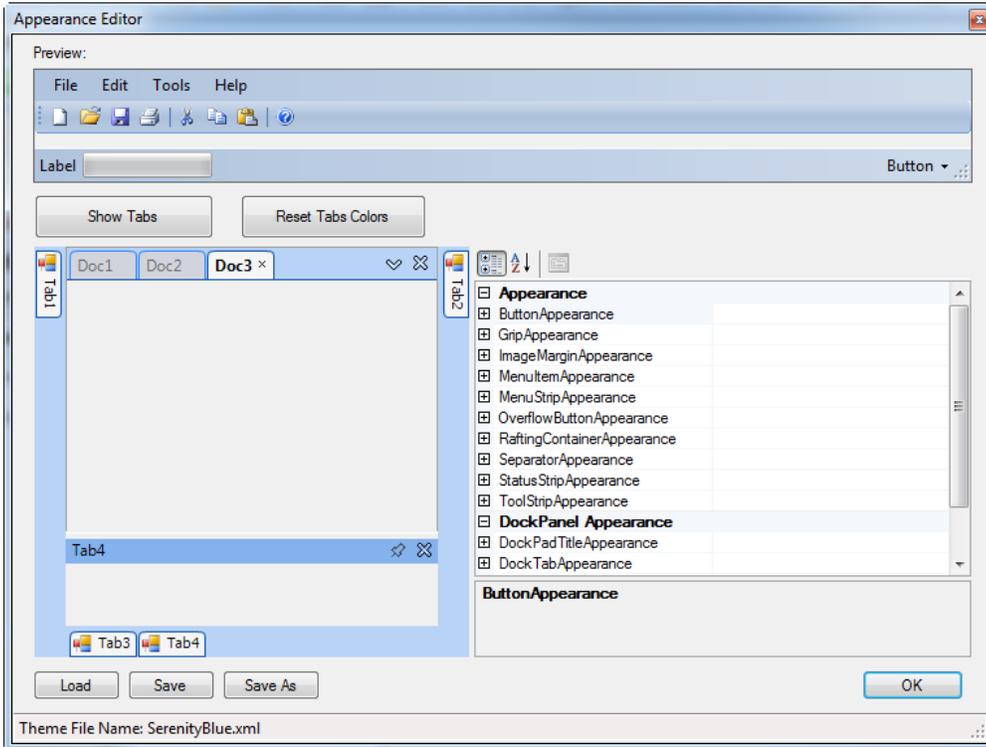
There are also options for using small icons on toolbars, specifying font sizes for four main areas of the IDE, and an easy way to customize shortcut keys.

The /ConfigDir command line parameter, which lets you specify a different configuration directory, is now documented. If you use /ConfigDir without specifying a folder name then the IDE settings are kept under the Clarion bin folder. You can use /ConfigDir with ClarionCL and ResetIDE.

There are five slightly ambiguous buttons above the AppGen tree, which you can use to change display mode. Although this is more efficient than using the drop list, one could argue that they should be on the right, in place of the drop list. It would also be helpful if they had hot keys for keyboard aficionados:
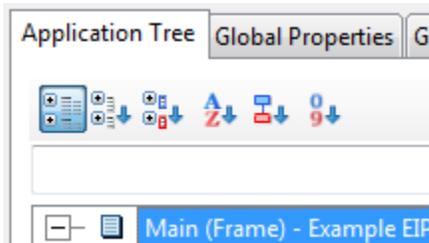
There's an image viewer in the IDE which works with various image types including icons and PNG files.
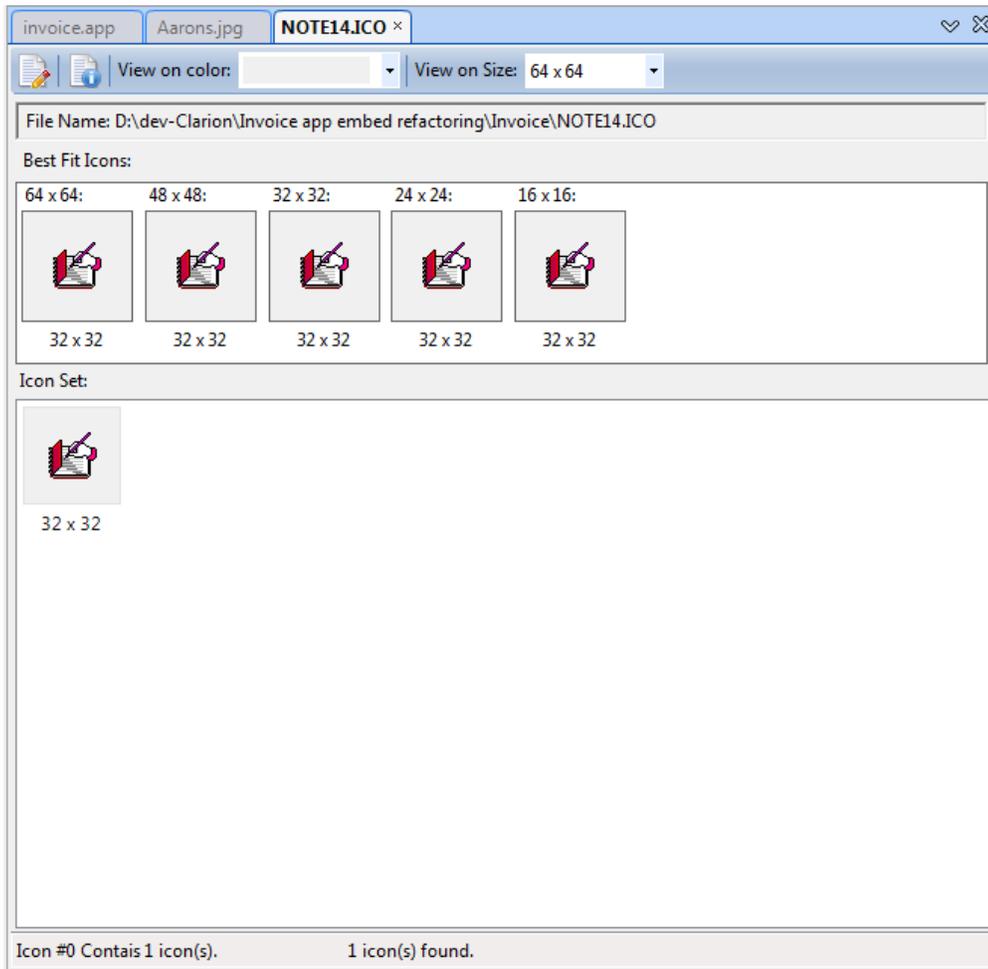
There are some enhancements to file dialogs which now remember the last place they were opened or use the redirection file to find possible matching files on first use. In the editor you can search the current document directory, and you can exclude generated source from searching while in the embeditor.

In general the IDE has a bunch of little improvements, including manually clearing ABC cache files, copy and select buttons on errors, output and search pads, GUID generation, filtered properties locator, dictionary search improvements, and many more.

There is a new SQLite driver (with example app). SQLite is a highly popular database primarily intended for single use situations such as personal application data. There is also a new SQLExecutorClass that makes it easier to create and execute SQL scripts made up of multiple statements.

For all SQL drivers there is a new PROP:SQLRowSet "that can be used to execute SQL statements that return result sets, but are not SELECT or CALL statements."

There is a JSONDataClass to convert Clarion variables and structures (including queues) into JSON objects.

There is ABC support for enforcing single instances of applications and single instances of threaded procedures.

A new SystemString class provides extensive string manipulation functionality including compression, blob conversion and much more. There are over 80 methods in the class.

There are also a couple of new classes in support of reusable user-defined controls; it will be interesting to see how this pans out as control reuse (think browses, for instance) has been something of a holy grail for Clarion devs.

I've really just skimmed over the new features - there are rather a lot of these, and I want to get on to a few more specifics.

Comparing releases

Any time I get a new release of Clarion I like to compare the install directories to look for things that are new and which may not yet be noted in the docs.

Things that went away in Clarion 9 include the blue gradient image file (presumably used in the IDE), CommonUtils.tpw which contained

procedure parameter list code (presumably this has been replaced by the previously announced improvements in how the AppGen displays prototypes and parameter lists), and clazlib.lib (I'm guessing compression/decompression is now baked into the RTL). Various files under the bin directory also seem to have been moved or replaced.

There is a new ABUserControl.tpw which is clearly in support of the new user controls functionality. It includes some procedure templates, which perhaps are where the controls are declared, as well as an extension template to attach user controls to a window.

New source files include the aforementioned user control, string, JSON, SQLite and SQL script classes. There are also a couple of new INC files. ClaTALK.inc has prototypes for SendMail and SendSMS library procedures (the matching lib appears to be missing, however), and ClaIMG.inc has prototypes for image file to PNG conversions.

H5 Builder

The help doesn't contain any mention of H5 Builder, SoftVelocity's announced multi-platform web development tool. But there are number of web-related files in this install that weren't in the last Clarion 8 version. Some of these are old Internet Connect-era files, and H5 builds on Internet Connect and Web Builder, SoftVelocity's previous web development products. I'll touch on these a bit more below.

Template changes

Template changes include the removal of a separate Parameters prompt, most welcome since it's been years now that prototypes and parameter lists can (and should be) the same, with the exception of the return type (if any).

There are a few new embed points here and there. File lists now typically include a %TableSchematicsDescription variable. Triggers have grown a bunch of new embed points. There are a number of changes to support single instances of applications and procedures, also previously mentioned.

Source changes

WindowExtenderClass has some new methods. I'm a little embarrassed to say that I don't think I even knew this class existed, but it's in Clarion 8. New methods include GetEXEFileName, IsInstanceRunning and RestoreInstanceRunning. Many of the other class methods deal with system tray icon handling.

There are a number of IC* files that have been updated, and I think it's safe to assume that IC stands for Internet Connect. So again that argues for progress being made on the H5 front.

Touch friendly?

While looking through the changed files I came across a couple of new calendar windows that were labelled with this comment:

```
!! Window structure for the Small popup Calendar Touch Friendly
```

There are also some matching classes.

If you feel like speculating, there's a SoftVelocity post from January that mentions touch-enabled software.

Reports

There are substantial changes to the source that supports report generation targets. It looks like a new IOutputGeneratorTarget interface has been abstracted out of the IReportGenerator interface.

Summary

There are a number of intriguing new and changed bits in this first Clarion 9 beta. Tops on my list are the SQLite driver, the SystemString class, the SendMail and SendSMS functions, the removal of the separate parameters prompt from the AppGen, JSON support, SQL improvements, and support for user-defined controls. As I said earlier there are other little nuggets awaiting discovery; if there's something in Clarion 9 that you're particularly happy to see (or something you were expecting that isn't there), please post a comment below.

Clarion 9 apps using Report to PDF to require C++ redistributable?

There's a thread in the Clarion 9 newsgroup that seems to confirm that if you're using the ReportToPDF functionality in Clarion 9, any such apps will need to also have the Microsoft Visual C++ 2005 Redistributable installed on that machine.

The tricky thing is that your apps may run fine on your test machines because you have the 2005 Redistrutable, but then things blow up when you ship product to your customers.

Here's a post by L Jack Wilson on the subject:

Geert,

I imagine the PNG support requires ClaRunExt.dll, since libmaker reports it contains:
?ImageToPNG1@@YAJPBD@Z
?ImageToPNG2@@YAJPBD@Z
?RotateFlip@@YAJPBD@Z
?SaveThumbnail@@YAJPBD@Z

Have you tested your app on a machine that doesn't have Clarion 9 IDE installed? I too use the ReportToPDF and noticed I need to have the ClaRunExt.dll in my program directory or my main exe will not load.

I also found with a fresh install of my program on a Windows 7 32-bit box I could not launch an app that requires ClaRunExt.dll to be present without also installing Microsoft Visual C++ 2005 Redistributable - KB2467175 8.0.51011. This same redistributable is installed by the Clarion 9.0.10294 installer. Without that installed any programs that required ClaRunExt.dll would fail to run with a 0xc0150002 error.

Using dependency walker on ClaRunExt.dll tells me it requires the side-by-side "stuff" that the redistributable installs (along with the other ms dlls).

In reply, Diego said:

```
Hi,

All that Jack is saying is correct.

Regards,
Diego Borojovich
www.Softvelocity.com
```

If it's the PNG support that triggers this, then perhaps any use of PNG files will require the C++ redistributable.

Graham Dawson wondered how to check for an existing installation of the redistributable. Richard Rose pointed out a couple of registry keys (the 2005 package is the one Clarion apps need):

- VC++2005 (SP1):
  HKLM\Software\Microsoft\Windows\CurrentVersion\Installer\UserData\S-1-5-18\Products\B25099274A207264182F8181ADD555D0
- VC++2008 (sp1): HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{3C3D696B-0DB7-3C6D-A356-3DB8CE541918}
- VC++2008 (original): HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{FF66E9F6-83E7-3A3E-AF14-8DE9A809A6A4}

The easiest way to deal with this seems to be to build your installs with LinderSoft's SetupBuilder, which can install the 2005 redistributable if it isn't already present. Yes, SetupBuilder is an additional cost but if you ship product it's almost certainly a wise investment even without this feature.

Update: Confirmation by Bob Z

Bob Zaunere has confirmed the above requirements:
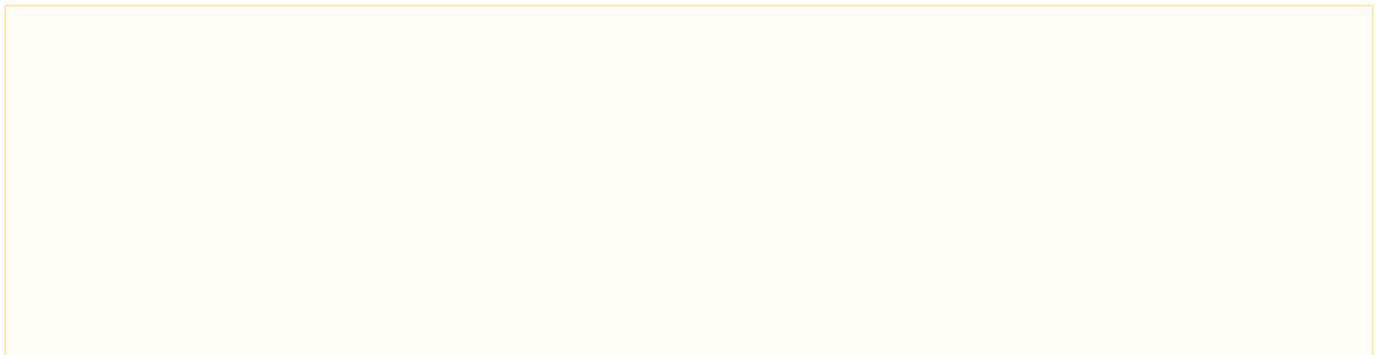
```
In the current C9 release you do need 2 things when distributing your program;

1. installation of the the 2005 VC++ runtime (x86), *note: in the next release
(today or tomorrow),you will not need it _unless you are using the PDF Report
Generator, and then _only _if you are using the new "Use Scan Copy Mode"
option, which by default is OFF.

2. ClaRunExt.dll (located in the Clarion BIN folder)

If you use SetupBuilder the install of the VC++ runtime (x86) is all handled by
a checkbox located under: Setup Requirements->Core PreRequisites.
We'll also be shipping a redistributable .exe that will handle the install of
the VC++ runtime (x86) for those who may deploy via .zip or .rar
```

Note the phrase "current c9 release" - in future releases the runtime will only need to be installed if you are using the PDF Report Generator *and* specifically using the new "Use Scan Copy Mode".

Update: More details on the "scan copy" innards, from Diego:

```
Deeply inside is converting the report to a png of some resolution and color
deep to be able to keep the
information of the report (font,images, resolution, content ,etc) exactly the same.
With out hte need of embebing the Fonts or to support any other images formats
and adding security to the content (a PDF is just text when not compressed and
encripted)
Estern char sets now can be used in the PDF with out having to store the fonts
or have the Font in the user.
With out that option the PDF engine process the report and re-create the report
in PDF format, but not always the result is 100% exactly but using this option
the print out of one and the other are 99.98% a match.
```

Graham Dawson has confirmed that when you use Scan Copy you do in fact get a PDF that is composed of images only and contains no searchable text.

Update: ClaRunExt.dll now dynamically loaded

As of build 10309 ClaRunExt.dll is no longer statically linked. From a post by Bob Z:

```
That .lib file is not needed because there is no static linking to
Clarunext.dll - its been changed to a runtime dynamic load that only
happens _if you are using the new 'Scan copy mode', so if your .app/project is
looking for it then either;
- its a leftover project reference from when it was a static link, and you can
just delete it
- you are using the IP driver in this .app (an update will be out today that
removes its linking to clarunext
- you don't have or are not using the latest templates; core (EE) or PDF if running PE
```

Consistent, random GPFs? Rebuild all C9 binaries!

Bob Z got some attention with a posting in the newsgroups:

```
Subject: consistent random GPFs
```

```
    Note to all:

    The FILE structure used internally changed in C9, so any 3rd party tool that
    works with FILEs must be rebuilt. If you use any 3rd party binary that works
    with FILEs (or your own binary) that wasn't rebuilt with the C9 compiler you
    can expect consistent random GPFs.


    _
    Robert
```

In other words, any code that declares a FILE structure must be rebuilt for C9.

But this only reinforces a previously stated maxim: **All binaries must be rebuilt for C9!**

The bit that got everyone's attention was "consistent, random GPFs."

Bob later indicated the changes are purely internal - no developer code needs updating (only recompiling). The structural changes were needed for future support for non-Latin characters.

Clarion 9's list box sorting

Clarion 9 appears to add support for list box sorting, so I decided to give it a whirl. '

The new bits I'm aware of are some properties:

```
PROPLIST:DefHdrTextColor  EQUATE (7C2AH) ! integer: Text color in header
PROPLIST:DefHdrBackColor  EQUATE (7C2BH) ! integer: Background color in header
PROPLIST:HdrSortTextColor EQUATE (7C2CH) ! integer: Text color in header of sort
column
PROPLIST:HdrSortBackColor EQUATE (7C2DH) ! integer: Background color in header of sort
column
PROPLIST:SortTextColor    EQUATE (7C2EH) ! integer: Text color of sort column
PROPLIST:SortBackColor    EQUATE (7C2FH) ! integer: Background color of sort column
PROPLIST:HasSortColumn    EQUATE (7C30H) ! boolean: TRUE if sort column is supported
PROPLIST:SortColumn       EQUATE (7C31H) ! integer: Current sort column
```

and a new event:

```
EVENT:HeaderPressed EQUATE (1FH)
```

I put together a small demo app:

```
                                        PROGRAM

                                        MAP
                                        END
      INCLUDE('equates.clw'),ONCE
DataQ                                   QUEUE
Column1                                     string(20)
Column2                                     long
Column3                                     string(20)
                                        END
x                                       LONG

MyWindow                                WINDOW('Caption'),AT(,,336,285),GRAY,FONT('MS
Sans Serif',8,,FONT:regular)

BUTTON('&Close'),AT(287,262,36,14),USE(?CancelButton),LEFT

LIST,AT(15,8,307,243),USE(?LIST),VSCROLL,FROM(dataq),FORMAT('100L(2)|M~C' & |
                                            'olumn 1~100L(2)|M~Column
2~100L(2)|M~Column 3~')
                                        END

      CODE

      ! Create some dummy data
      loop 100 TIMES
          loop x = 1 to 20
              DataQ.Column1[x] = chr(random(65,122))
              DataQ.Column3[x] = chr(random(65,122))
          END
          Dataq.Column2 = random(1,10000)
          add(dataq)
      END

      OPEN(MyWindow)
      ACCEPT
          case event()
          of EVENT:HeaderPressed
              0{prop:text} = 'Current sort column: ' & ?list{PROPLIST:SortColumn}
          END

          CASE FIELD()
          OF 0
              CASE EVENT()
              OF EVENT:OpenWindow
              END
          OF ?CancelButton
              CASE EVENT()
              OF EVENT:Accepted
                  POST(EVENT:CloseWindow)
              END
          END
      END
```
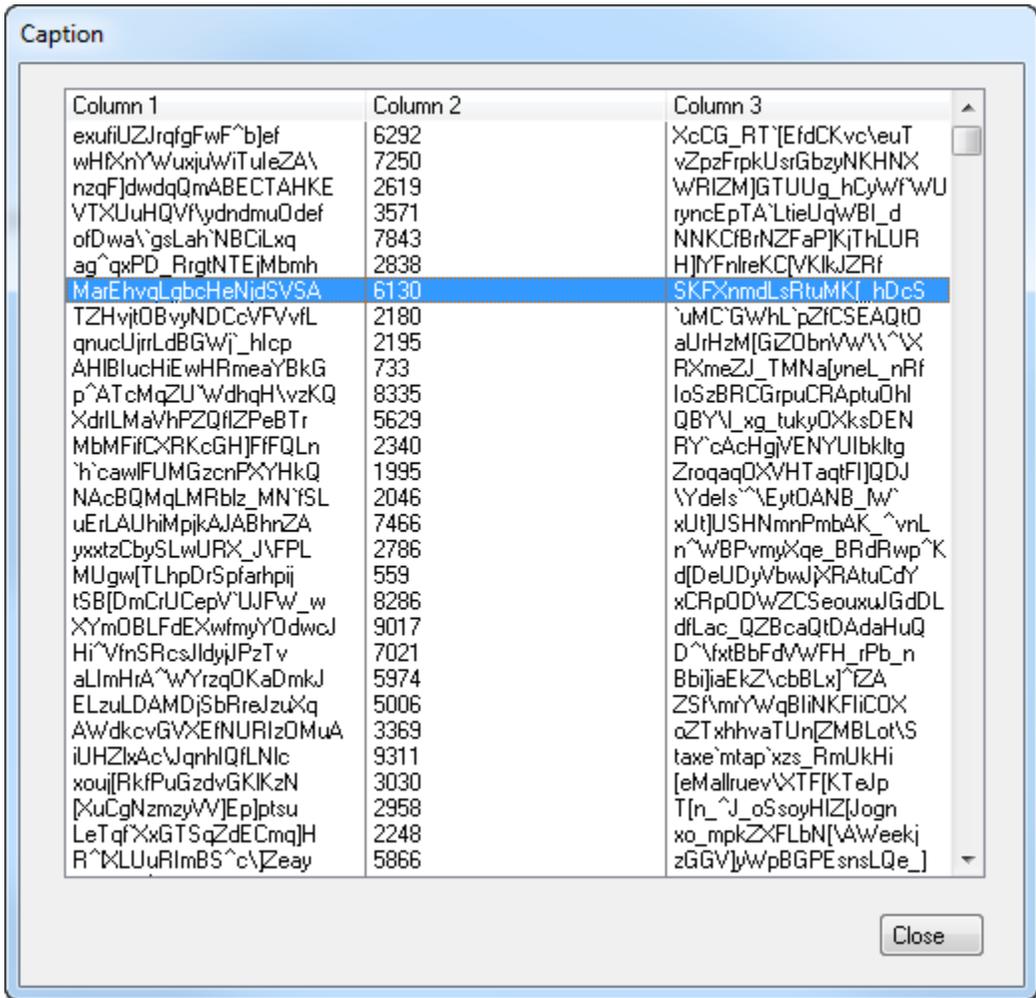
I ran the app, but I didn't notice anything different about the list box. It didn't sort on columns or produce any header pressed events. For a moment I thought maybe I needed an IMM attribute, but of course that removes all of the built in event handling including scrolling, so I took it right back off again.

Here's the sample app:

Then I realized that I was missing the PROPLIST assignments in my code. I added them to the OpenWindow event handling:

```
CASE EVENT()
         OF EVENT:OpenWindow
             ?list{PROPLIST:HasSortColumn,1} = true
             ?list{PROPLIST:HasSortColumn,2} = true
             ?list{PROPLIST:HasSortColumn,3} = true
         END
```

That triggered EVENT:HeaderPressed, but no automatic sorting. Well, that's not a big deal. I added this code:

```
case ?list{PROPLIST:SortColumn}
        of 1
            sort(dataq,dataq.Column1)
        of 2
            sort(dataq,dataq.Column2)
        of 3
            sort(dataq,dataq.Column3)
        END
```

Presto - list box sorting:

I also added some code to set PROPLIST:HdrSortTextColor and PROPLIST:SortTextColor for visual clues.

But there are some oddities. Header coloring isn't always cleared when you select another column, and at the start all column headers are colored. Also the first click on a header changes the color, but the sorting doesn't happen until the second click, which can happen at any time after the first click (i.e. it's not a true double click). Here I've clicked on Column 2 but the sort order is still Column 3.
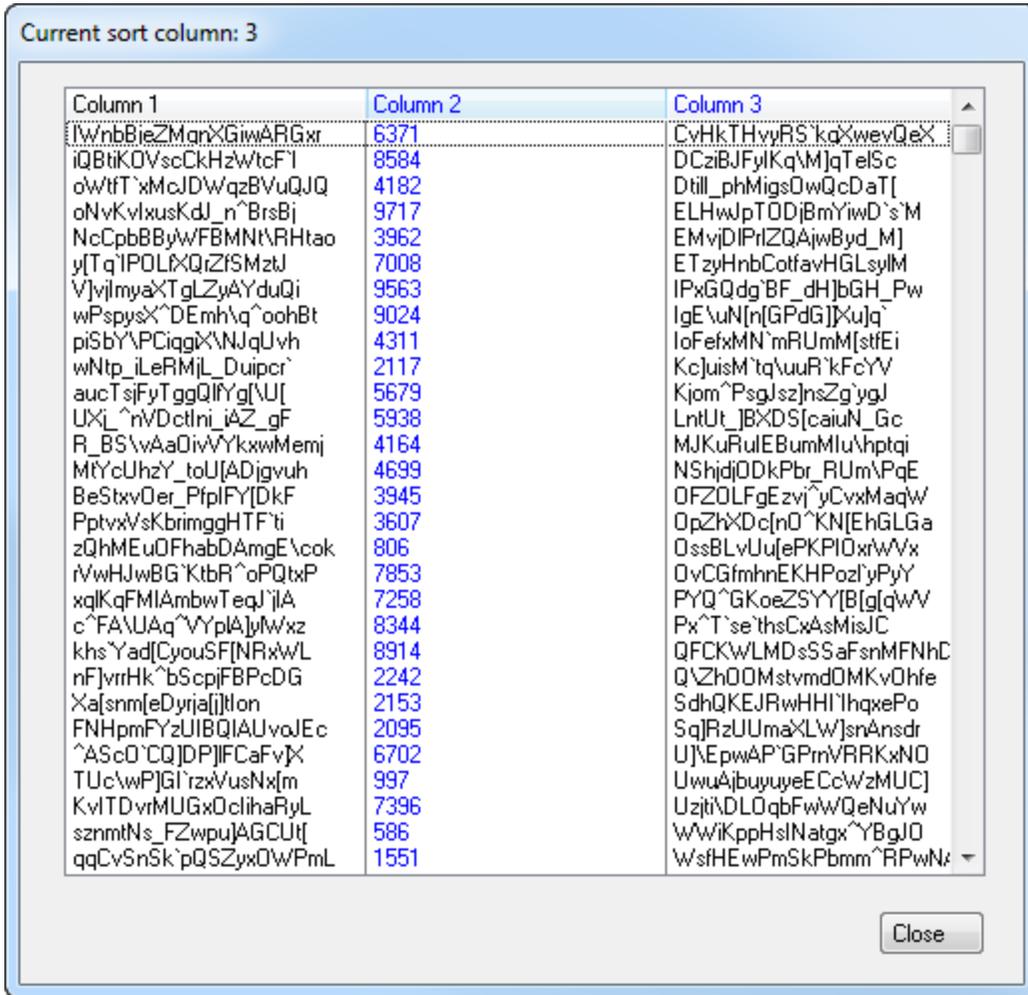
After playing around with this a bit more I realized that the problem is that PROPLIST:SortColumn doesn't return the column you just selected, it returns the column previously set as the sort column. Either there's a bug there or I'm handling the event wrong.

There doesn't seem to be any way internally to track the state of the sort order (i.e. if you want ascending/descending), so at present you'd need to do that in your own code. Also I don't see a means to add an image to indicate the sort order. There are ways to do that already, as Randy Rogers showed in ClarionMag, but they're non-trivial.

While not a complete solution to sorting list boxes, Clarion 9 offers a good if slightly buggy start. I'd love to see a property for a sort order indicator image and some internal toggle tracking to go with it,.

Here's the complete source for the sample Clarion 9 program:

```
                                          PROGRAM

                                          MAP
                                          END
        INCLUDE('equates.clw'),ONCE
DataQ                                      QUEUE
Column1                                        string(20)
Column2                                        long
Column3                                        string(20)
                                          END
x                                         LONG

MyWindow                                  WINDOW('Caption'),AT(,,336,285),GRAY,FONT('MS
Sans Serif',8,,FONT:regular)
```

```
BUTTON('&Close'),AT(287,262,36,14),USE(?CancelButton),LEFT

LIST,AT(15,8,307,243),USE(?LIST),VSCROLL,FROM(dataq),FORMAT('100L(2)|M~C' & |
                                              'olumn 1~100L(2)|M~Column
2~100L(2)|M~Column 3~')
                                        END
    CODE
    loop 100 TIMES
        loop x = 1 to 20
            DataQ.Column1[x] = chr(random(65,122))
            DataQ.Column3[x] = chr(random(65,122))
        END
        Dataq.Column2 = random(1,10000)
        add(dataq)
    END

    OPEN(MyWindow)
    ACCEPT
        case event()
        of EVENT:HeaderPressed
            0{prop:text} = 'Current sort column: ' & ?list{PROPLIST:SortColumn}
            case ?list{PROPLIST:SortColumn}
            of 1
                sort(dataq,dataq.Column1)
            of 2
                sort(dataq,dataq.Column2)
            of 3
                sort(dataq,dataq.Column3)
            END
        END

        CASE FIELD()
        OF 0
            CASE EVENT()
            OF EVENT:OpenWindow
                ?list{PROPLIST:HasSortColumn,1} = true
                ?list{PROPLIST:HasSortColumn,2} = true
                ?list{PROPLIST:HasSortColumn,3} = true
                ?list{PROPLIST:HdrSortTextColor} = color:blue
                !?list{PROPLIST:HdrSortBackColor} = color:yellow
                ?list{PROPLIST:SortTextColor} = color:blue
                !?list{PROPLIST:SortBackColor} = color:yellow
            END
        OF ?CancelButton
            CASE EVENT()
            OF EVENT:Accepted
                POST(EVENT:CloseWindow)
            END
```

```
        END
    END
```

Clarion 9 build 10094 release notes

Release Notes: C9.0.10094

Fixes/Features/Changes --- Alpha rel 2-----

FEATURE: Support for coloring the LIST control column headers and text (**this is a Work In Progress, UI refinements and template support to come**)
FEATURE: Support of PROPLIST:BarFrame, PROPLIST:HdrTextColor and PROPLIST:HdrBackColor properties in the ListBox control
FEATURE: Support of PROPLIST:BarFrame, PROPLIST:HdrTextColor and PROPLIST:HdrBackColor properties in the ListBox Format Editor
FEATURE: Support of Sort column in LIST controls
FEATURE: Add HT and HB modifiers to LIST format string to support column/group header's text and background colors
FEATURE: EVENT:HeaderPressed EQUATE (1FH)
FEATURE: new properties for the LIST control:
 PROPLIST:HdrSortTextColor EQUATE (7C2CH) ! integer: Text color in header of sort column
 PROPLIST:HdrSortBackColor EQUATE (7C2DH) ! integer: Background color in header of sort column
 PROPLIST:SortTextColor   EQUATE (7C2EH)   ! integer: Text color of sort column
 PROPLIST:SortBackColor   EQUATE (7C2FH)   ! integer: Background color of sort column

FEATURE: Added the ResetIDE.exe to the Tools->Options
FEATURE: Added specific toolbar items for Project, apps, resources.
FEATURE: ClaImg: Image Function to Rotate and Flip
FEATURE: ClaImg: Image Function to Save a Thumbnail image
FEATURE: WMFParser, Added the option to skip invalid external images in the processing of the WMF file (Set/Get SkipInvalidExternalIamges)

CHANGE: Added some virtual methods to make it possible for the ReportTargetSelectorClass to be easily derived
CHANGE: Addins Manager now shows the installation path for the user installed addins
CHANGE: IDE Notification popups are now off by default
CHANGE: The ResetIDE tool will disable its options if the IDE is running

FIX: #GROUP name mispelling
FIX: Addins Manager was showing the .sdaddin extension in the installed addins dialog but the .sdaddin format is not supported
FIX: Addins Manager was not showing the user installed addins by default
FIX: Addins installed outside the Accessory directory were not displayed in the list of installed addins.
FIX: Clip rectangle could be incorrect sometimes on drawing a themed background
FIX: Drawing underscore for shortcuts under Win 8
FIX: File Drivers were not removed from the Driver Registry List
FIX: If you removed a file driver or synchronizer from the list of registered components, the component would reappear in the list the next time you started the IDE
FIX: Open via Redirection Form control layout
FIX: Opening a Solution in a different folder with the exact same name as the currently open Solution would reopen the existing Solution rather than the newly selected one
FIX: Sometimes when a PRAGMA is selected in a new CLW IDE might show a warning message
FIX: Sometimes an exception could trigger when closing the Solution, if while it is in the process of closing the user clicked on the .App in the Solution
FIX: The Report template was generating a call to GetSelected() instead of GetReportSelected()

PTSS 39880: Additional toolbar buttons on Solution Pad
PTSS 39882: #GROUP name mispelling: %WindowIsOneInstance
PTSS 39888: Open File via Redirection file dialog - Copy button not resizing.
PTSS 39888: Open File via Redirection file dialog - Copy button not resizing.
PTSS 39895: ReportTargetSelectorClass was doing a RETURN instead of a "Do ProcedureReturn" in the Clarion chain
PTSS 39902: Unable to register any Addins

Clarion 9 build 10125 release notes

```
Release Notes: C9.0.10125


Fixes/Features/Changes --- Alpha rel 3-----

FEATURE: Option to do automatic conversion of all applications in the current Solution (added to the App
Conversion dialog)
FEATURE: Dictionary Editor: Added search for Modifications/Creation dates on any item
FEATURE: Dictionary Editor: Allow to do a search for all the DCT comments in every entity

CHANGE: Create SHEET controls with the WS_EX_TRANSPARENT style
CHANGE: Modified and Creation Date now display in the same format that is used internally to store them
CHANGE: Set the font for Window Designer errors to use the IDE Fixed Font size (8) to visualize the correct
column of an error
CHANGE: report better errors when a an error is found in the REPORT/WINDOW structure

FIX: Current position in event queue could become incorrect if too many events are posted rapidly
FIX: DCT Editor, Column Editor was not showing properly some controls like the characters and places entry
FIX: DCT Search Form didn't open if the DCT was not in focus
FIX: Expand/Contract all nodes in the Data Pad didn't have the correct tooltip
FIX: Template generate embed responses must be removed after exit from the WINDOW/REPORT Designer
FIX: Window Designer error message was not read-only and the error wrapped over multiple lines

PTSS 39908: embed tree showing existing embeds as orphaned
PTSS 39930: POST's order disturbed
PTSS 39904: ImageEx Controls on Tabs not displaying
```

Clarion 9 build 10205 release notes

```
Changes from the last beta:

FEATURE: ABC Sort Headers Template - supports sort column colorization (Actions->BrowseBox
Behavior->Extended Options)
FEATURE: Added the option to the Report Procedure template to open the Report Output after its generated
FEATURE: TopScan updated to use the C9 RTL

CHANGE:  The DCT system no longer warns you about editing a .dct with unregistered file drivers if you open
the .dct in read-only mode
CHANGE: Change ABC Sort header template uses the new PROPLIST:HasSortColumn property and the built-in
support to sort on a headers click event
CHANGE: Change the message "Applications processed without errors: ({0})" by "Applications successfully
processed: ({0})"
CHANGE: Change ABC Sort header template uses the new PROPLIST:HasSortColumn property and the built-in
support to sort on a headers click event
CHANGE: Templates #PROMPT Color dialog now uses the new Color dialog (as used in the rest of the IDE)

FIX: The SQLite driver would lock up when doing LOGOUT of more than 1 file.
FIX: The blob-to-control extension template did not work properly when you used the resizer template
FIX: Error pad did not retain the currently selected error when focus was lost
FIX: Regression on checking for type Metafile in image conversion
FIX: Resolve Duplicated exports in Win32.Lib and ClaHTML.lib
FIX: SortHeader template code was alerting the MouseLeft key but that is not needed anymore with the
support for EVENT:HeaderClick
FIX: The SQLite driver would lock up when doing LOGOUT of more than 1 file.
FIX: The focus rectangle was not drawn for themed CHECK and RADIO controls
```

Clarion 9 build 10241 discussion

Clarion 9 build 10241 is the first release of C9 to CSP program participants.

There was no change list included with the release email.

Speed improvements

Some devs are reporting significant speed improvements within the IDE,

Registry issues using C8 within C9

If you use C9 to host your C8 development (rather than installing each version separately, which is the default) then C9 will make your C8 registry unreadable from the C8 IDE, as the registry format has changed.

Problem generating/building DLLs

The IDE throws a generation error when creating code for DLLs. The app will build but as no EXP file is generated you can't use the DLL (at least not by linking in the DLL's lib). Diego says this will be fixed in the next build.

> (i) **Update: Interim fix!**
> Bob Z has provided an interim fix for the DLL problem, which is caused by an incorrectly formatted Type32 node inside ClarionProperties.xml file.
>
> This XML file is located in C:\Users\<username>\AppData\Roaming\SoftVelocity\Clarion\9.0 (where <username> is replaced with your own user name).
>
> Here's how an incorrectly formatted file appears:

```
680          <MatchCase value="False" />
681          <MatchWholeWord value="False" />
682          <IncludeSubdirectories value="False" />
683          <IncludeReadOnlyBlocks value="True" />
684          <SearchStrategyType value="Normal" />
685          <LookIn value="C:\Users\Dave\Documents\Clarion Projects" />
686          <FindPatterns value="capitalizeÿ,private" />
687        </Properties>
688        <ICSharpCode.SharpDevelop.Gui.SearchAndReplaceDialog.Location value="783, 345" />
689        <SearchAndReplace.SearchResultPanelViewMode value="Flat" />
690        <Type32 />
691        <Properties name="Registry">
692          <Default_Width value="300" />
693          <Default_Height value="200" />
694          <MessageLines value="2" />
695          <Reregister_if_changed value="on" />
696          <Update_Template_Chain value="off" />
697          <Recreate_deleted_templates value="off" />
698          <EnableAssert value="on" />
699        </Properties>
700      </ClarionProperties>
```

> The Type32 node should not exist. Instead it should be replaced by the following Properties node:

```
<Properties name="Type32">
    <signed value="long" />
    <unsigned value="long" />
    <handle value="long" />
    <bool value="long" />
</Properties>
```

> This will be fixed for the next release, but meanwhile you can edit the file manually.
>
> An extremely weird thing happened while I was editing my ClarionProperties.xml in Notepad++. I had copied the above text into the clipboard to paste into this document, and then to paste into the XML file. But I figured I should probably close Clarion first just in case it wrote to the file on exit. I closed Clarion. Notepad++ said the file had changed. Aha! I was right. I reloaded the file.

And to my great surprise it was now the correctly formatted file! How did that happen? Did what I had in the clipboard somehow make it into the file? That really doesn't make a lot of sense to me. Or did the IDE somehow wake up and realize it needed to rewrite the XML file?

Puzzling.

Start page styling

There's been some grumbling about a change to the IDE that internalized start page styling so it can no longer be customized via layout.css.

Can you ship product with this release?

At least one dev is shipping C9-built apps to customers with no reported issues.

SQLite driver

Not sure I completely understood the discussion, but it appears blob contents are not being copied as expected.

Report generator interface changes

There have been some changes to the report generator interface so if you have older source or an older version of a third party product that uses this interface you'll need to get the update or modify the source.

Possible duplicate symbols

Diego: "Most of the symbols from Win32ext.lib were merged with the Win32.lib in C9."

%Parameters is read only

In C9 there is only one prompt for prototypes (as there should be). Older templates that attempt to set the %Parameters value will trigger an error. In the old days Clarion code had labels in parameters and data types in prototypes. For years now it's been best practice to have parameters and prototypes declared exactly the same (except that for procedure/method implementations you have to leave off the return type if any, which seems pretty silly to me).

/ConfigDir

Graham Dawson has reported problems with Clarion not registering drivers when the /ConfigDir IDE switch is used.

Clarion 9 build 10274 release notes

Clarion 9 build 10274 has been released to CSP program participants. Fixes include:

```
FIX: #Suspend error when making a .DLL
The initial beta release could create an invalid setting in the ClarionProperties.xml file that
would cause
a #Suspend error and prevent making of .DLLs, due to a missing properties section of
ClarionProperties.xml

The problem is fixed now in this release and that the section will get created properly, but to fix
the _existing ClarionProperties.xml
file you either have to:

Run ResetIDE.exe and choose option (4) - does not require re-entering your serial number, but clears
IDE settings

- OR -

Open ClarionProperties.xml and manually edit/delete the section " <Type32 /> "  (** if it doesn't
exist then no action is needed)

- OR -
Manually delete the ClarionProperties.xml - - requires re-entering your serial number
 in the "invalid" section within ClarionProperties.xml file this section gets created as:
  <Type32 />

   in a correct/valid ClarionProperties.xml file its created as:

  <Properties name="Type32">
     <signed value="long" />
     <unsigned value="long" />
     <handle value="long" />
     <bool value="long" />
 </Properties>

FIX: Exception on attempt to request entries from a missing properties section of
ClarionProperties.xml
FIX: FrameExtension template was generating ASSERTS
FIX: If an OLE control was declared in a MDI child window that has a MENUBAR, the window's controls
declared below the OLE control were created with the MDI frame as the parent
FIX: Midnight time converted from TIME to LONG incorrectly
FIX: Possible violation of heap consistency on changing picture of EIP entry control
FIX: Possible System.IndexOutOfRange exception
FIX: REMOVE(<file name>) worked for directories as well as for files and removed files recursively
in nested directories without confirmation
FIX: Setting '' (0) to PROP:Right, PROP:Center, PROP:Decimal worked incorrectly for ENTRY controls
FIX: Thread should not be locked during execution of constructors and destructors
FIX: Too early call to thread's destructor could cause retrieving of incorrect thread structure

FEATURE: New REMOVE functionality; REMOVE(<filename>,<options>) statement with additional parameters
to control removing of directories, processing of directories recursively, and showing progress and
confirmation dialogs

CHANGE: Add EQUATE for the Vietnamese charset
CHANGE: If the compiler returns an exception, show the address of the compiler's entry point to
better locate the GPF point
CHANGE: Update SystemString class to fix some potential problems

PTSS 39785: Co-operative threading hooks cause memory leaks and eventually an exception
PTSS 39980: REMOVE(file) can delete entire subtrees
```

Clarion 9 build 10294 release notes

SoftVelocity released Clarion 9 build 10294 on August 1 2013. Here are the release notes:

```
FEATURE:  You can now force dlls to be copied to the destination directory of the .exe using the
LibAlwaysCopyList.xml file located in the <appdata>\SoftVelocity\Clarion\9.0 folder
CHANGE: DataBrowser: set a reasonable default picture for Memo fields, enable ESC key for Cancel of
MemoEditForm
CHANGE: Update Application tree 'Sort By Date' icon
FIX: If you created/copied a local redirection file while a project was open, the context menu item
"Edit Redirection File" accessed from the project node in the solution explorer would open the base
redirection file rather than the new redirection file
FIX: If you deleted the local redirection file while a project was open, the context menu item "Edit
Redirection File" accessed from the project node in the solution explorer would throw an exception
FIX: Appearance Editor was missing an example of the checkbox menu items
FIX: Changing the fonts directly from the TextEditor Options, or popup optionswas not preserved
FIX: File Options Dialog executed form the Context menu was not resizing properly
FIX: Icon for an embed with code was being truncated when the font size was smaller than the default
FIX: Incorrect index name used in the ASSERT for Frame Extension
FIX: Some Color themes used an incorrect color in the Checkbox menu items
PTSS 40069: IDE can freeze while picking color
PTSS 40081: SystemStringClass bug
PTSS 40034: global and local data alpha sorted
```

In comparing 10294 to 10274 I noticed the addition of some DLLs:

Those back end bindings are Clarion.NET DLLs. Were they included accidentally? I looked around a bit more and discovered that the SoftVelocity.Clarion.* DLLs may be new to this directory, but they're also in the bin directory. In fact a number of Clarion.NET DLLs have been shipping for some time now even in Clarion 8, including:

- SoftVelocity.Clarion.ClarionCodeProvider.dll
- SoftVelocity.Clarion.Classes.dll
- SoftVelocity.Clarion.CompilerMessages.dll
- SoftVelocity.Clarion.Design.dll
- SoftVelocity.Clarion.FileIO.dll
- SoftVelocity.Clarion.Files.dll
- SoftVelocity.Clarion.LINQToFileProvider.dll
- SoftVelocity.Clarion.LINQToFileProviderNetDrv.dll
- SoftVelocity.Clarion.Procedures.dll
- SoftVelocity.Clarion.Runtime.Classes.dll
- SoftVelocity.Clarion.Runtime.Procedures.dll

Make of that what you will.

The one truly new file, Clalits.dll, is part of the SQLite support:
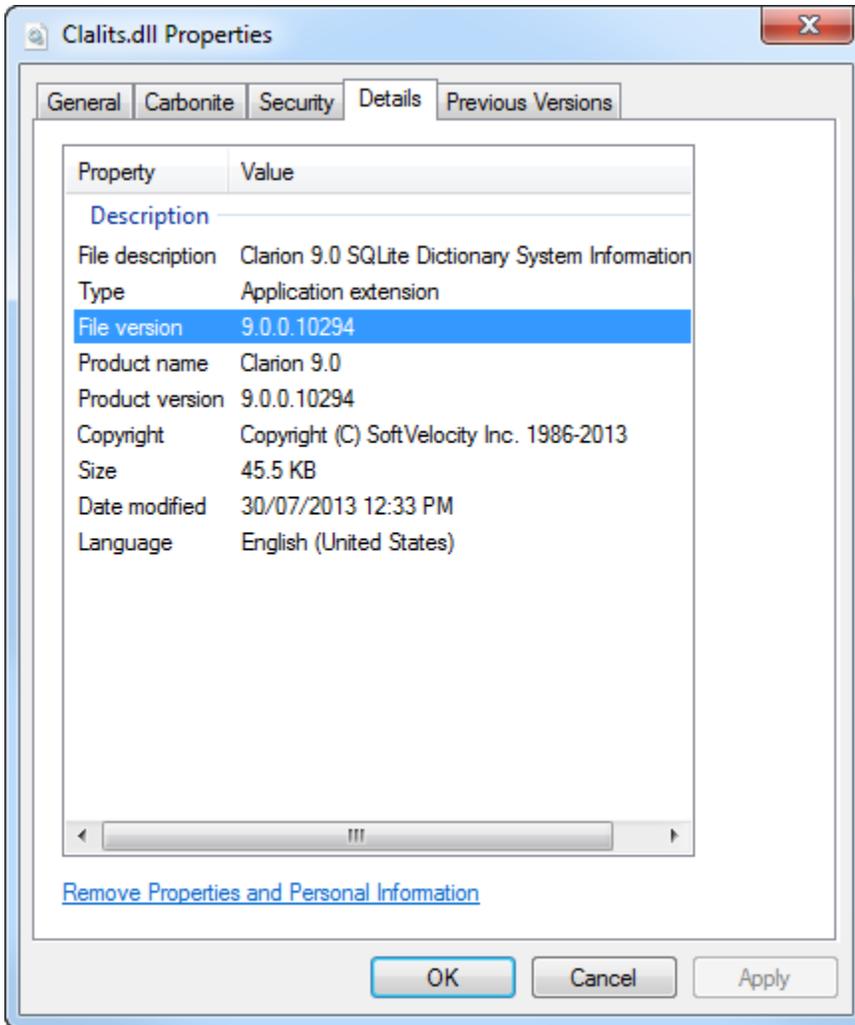
With the exception of one Assert statement in SystemString.clw, all of the changes from build 10274 are in the binaries.

Clarion 9 build 10309 release notes

```
beta 4 - Fixes/Changes/Features

FIX: Client area of non-MDI WINDOWs or APPLICATIONs with menubar resized on hiding
FIX: Status bar with height 0 created for WINDOWs/APPLICATIONs without STATUS attribute
FIX: IF LIST's font changed, styles defined after that used original font
FIX: CWTask was using the Environment.SpecialFolder.ApplicationData instead of the
PropertyService.ConfigDirectory making the /Config param fail if using any folder other then the
ApplicationData folder
FIX: On creating a new project from the app if the ClaRunExt.LIB was referenced it was asking for the
project
FIX: Changing color in controls and pressing Enter Key or ESC Key was not behaving as expected
FIX: The Extended Colors Editor was not used when editing colors for the WINDOW or APPLICATION colors
PTSS 40103: Black flickering in some fields
IMPROVEMENT: Reduce visual defects on resizing themed windows with PROP:Buffer set to values other than
0
```

Clarion 9 build 10319 release notes

```
beta 5 - Fixes/Changes/Features


CHANGE: Move the App tree Mode buttons to the main ApGen toolbar
CHANGE: Adjust AppGen screen to reclaim unused space
CHANGE: IPserver.tpl: Clarunext.dll is now loaded at runtime so no need to link to the .LibFIX: DCT
could not import a TXD/DCTX from a folder other than the DCT folder
FIX: PNG Images extension was not in the list of images to select
FIX: DESTROYing of a TAB control which has the TIP attribute and has been activated by mouse click could
cause an error
CHANGE: Templates: Remove reference to unused file which forced the linking of the DOS driver
```

Clarion 9 build 10324 release notes

```
beta 6 - Fixes/Changes/Features

***********************************************************
*** All binaries must be rebuilt; both your own and all 3rd party ***
***********************************************************
CHANGE: change internal RTL version number:
 (The RTL checks the value of the RTL version linked to every CW executable including CLARUN.DLL.
 A version mismatch is reported if:
- EXE/DLL's <major version> is not equal to same as the CLARUN.DLL
- if its detected that an EXE/DLL is made with a Clarion version prior to C9.0.10234)

CHANGE: Adjust appgen screen to reclaim unused space
CHANGE: IPserver.tpl: Clarunext.dll is now loaded at runtime so no need to link to the .Lib
CHANGE: Move the App tree Mode buttons to the main appgen toolbar
CHANGE: Remove reference to unused file which is causing forced linking of the DOS driver to program
CHANGE: normalize AppTree button sizes
FIX: DCT could not import a TXD/DCTX from a folder other than the DCT folder
FIX: DESTROYing of TAB control which has the TIP attribute and has been activated by mouse could cause
an error
FIX: Intermittent lockup of the IDE when "Unloading (AppName)"
FIX: PNG Images extension was not in the list of images to select
PTSS: 38289 unexpected result in case of Turkish as an ANSI codepage
```

Clarion 9 build 10332 release notes

```
⚠  beta 7 - Fixes/Changes/Features

    FEATURE: ABC: Added "Blank" and "All" options in the DropCombo template/class
    FEATURE: ABC: Added "NoIcons" property to the PopupClass manager to allow displaying the popup menu
    without the icons
    FEATURE: ROG: Added option to hide the Report output progress window

    FIX: Importing tables into a .dct from multiple different SQL databases (or multiple SQLite db
    files) required restarting the IDE
    FIX: SQLite: when attempting to browse a table in the IDE, and changing the selected DB file, the
    list of tables within the DB file was not refreshed
    FIX: Using the ellipsis button next to the file name entry field on the SQLite selection dialog
    would not populate the file name into the entry field


    CHANGE: Resize Control Strategies; Prompts resized and re-positioned
```

The following items from the build 10324 release notes were included in the build 10332 release notes:

```
*******************************************************************************
*** All of your binaries must be rebuilt; you need the updated versions of all SoftVelocity addon
products and you must also obtain the updated versions for any 3rd party DLLs that you use***
*******************************************************************************
*******************************************************************************

CHANGE: change internal RTL version number:
 (The RTL checks the value of the RTL version linked to every CW executable including CLARUN.DLL.
 A version mismatch is reported if:
- EXE/DLL's <major version> is not equal to same as the CLARUN.DLL
- if its detected that an EXE/DLL is made with a Clarion version prior to C9.0.10234)

CHANGE: Adjust appgen screen to reclaim unused space
CHANGE: IPserver.tpl: Clarunext.dll is now loaded at runtime so no need to link to the .Lib
CHANGE: Move the App tree Mode buttons to the main appgen toolbar
CHANGE: Remove reference to unused file which is causing forced linking of the DOS driver to program
CHANGE: normalize AppTree button sizes

FIX: DCT could not import a TXD/DCTX from a folder other than the DCT folder
FIX: DESTROYing of TAB control which has the TIP attribute and has been activated by mouse could cause
an error
FIX: Intermittent lockup of the IDE when "Unloading (AppName)"
FIX: PNG Images extension was not in the list of images to select

PTSS: 38289 unexpected result in case of Turkish as an ANSI codepage
```

Clarion 9 build 9.0.10371 release notes

```
/--- beta 9 Sep 12th ----- Fixes/Changes/Features
========================================
FIX: App conversion and/or project refresh/creation could fail with the message "unloading appname..."
and lock the IDE
FIX: If an .App was closed with some project CLWs left open then the App was re-opened, the IDE would
try to re-load the CLWs and it could fail with a StackOverflowException
FIX: ClarionCL command line was failing when generating apps
FIX: Toolbar control was not showing the Color Picker used in all other controls for the BackColor
CHANGE: Changed name/use of C80TFT.INI to ClaTFT.INI
CHANGE: when the command line Generator is called without a version param it is now set to the current
version
FEATURE: Clarion chain: Added option to hide the Report Output progress window
FEATURE: Added support to set the gradient color for TOOLBAR, BOX and PANEL from the Actions dialog and
to generate the required code
FEATURE: When populating a DIM field a popup dialog is presented to set the array index number in the
Designers (you can still set the array index manually as before)
```

Clarion 9.1 with touch support coming soon

Today (Nov 22, 2013) Bob Zaunere went on ClarionLive to give an update on the touch support coming in Clarion 9.1.

In general touch support is working "fantastic". The one thing that isn't working is drag and drop from images. List scrolling, inertia, all that is looking really good. Diego is testing from an Android tablet using Microsoft's RDP client.

Mike asked about keyboard popup on going to an entry field. Z thinks that could be coded but there is no automatic association in the API. Mike observed this does happen in RT apps but not in Windows touch apps.

The wizards will get an option to create touch style apps with larger buttons etc.

There are a couple of mostly-empty repositories on GitHub:

https://github.com/softvelocity/clariontouch
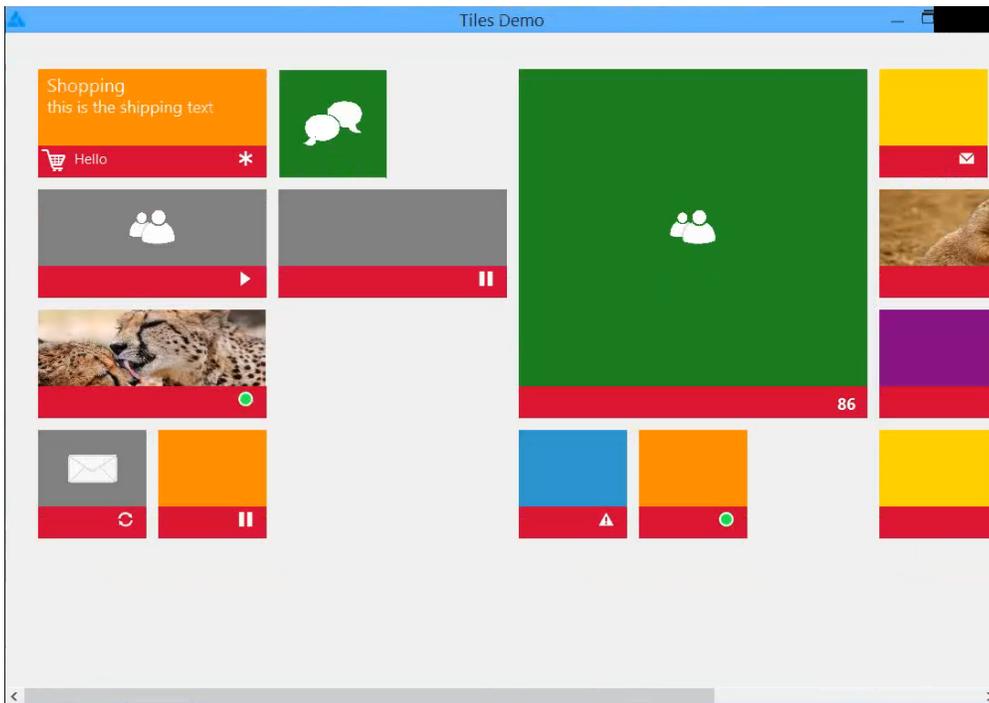
https://github.com/softvelocity/Tiles

There will also be one for the X-Buttons functionality Bob showed at DevCon.

The IDE has been 90% ported to .NET 4.

There is a new SV web site under development. This has a gallery section for screen shots of best-looking apps.

Repositories will also be up on BitBucket.

Diego showed the TileDemo app which uses some new classes.

Changing of background images is still a work in progress.

The TileGroupClass handles automatic repositioning of the tiles. Mike asked about letting the user move tiles around; this functionality could be added. As for displaying an OCX on a tile, not currently supported but you could probably handle this with a derived class that uses the tile location as the specification for where to show the OCX.

The touch demo showed some basic touch functionality, including scrolling by swiping the list box and the expected inertia effect.
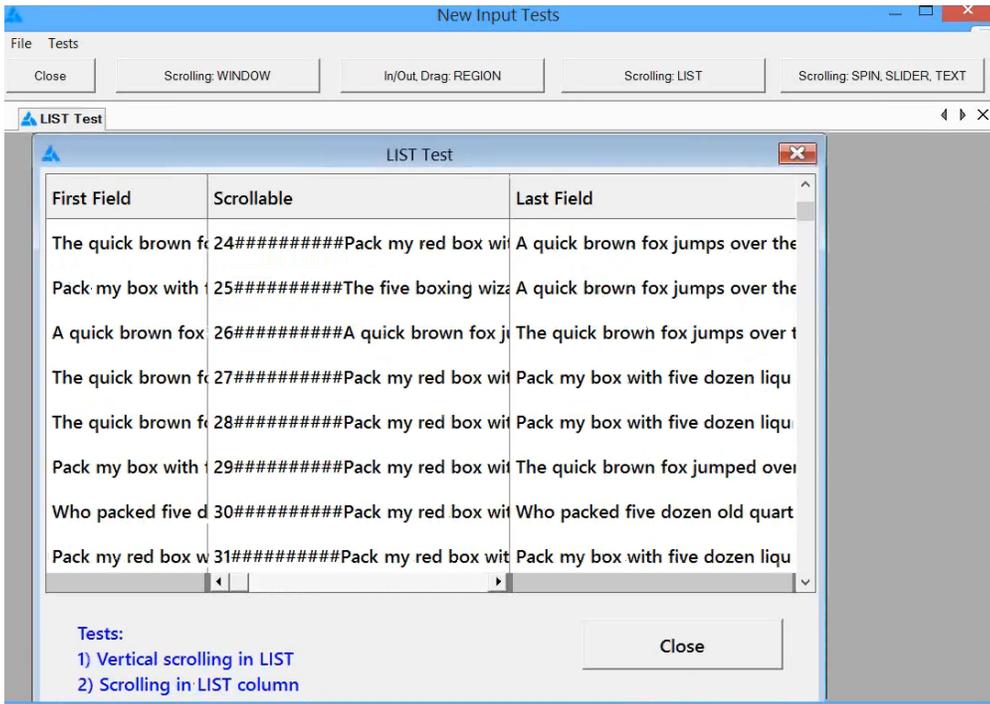
Diego also demonstrated the use of some other controls, all of which worked without any additional code. You can also go way beyond simple touch-enabling (simply by recompiling in 9.1) by detecting touch, gestures etc.
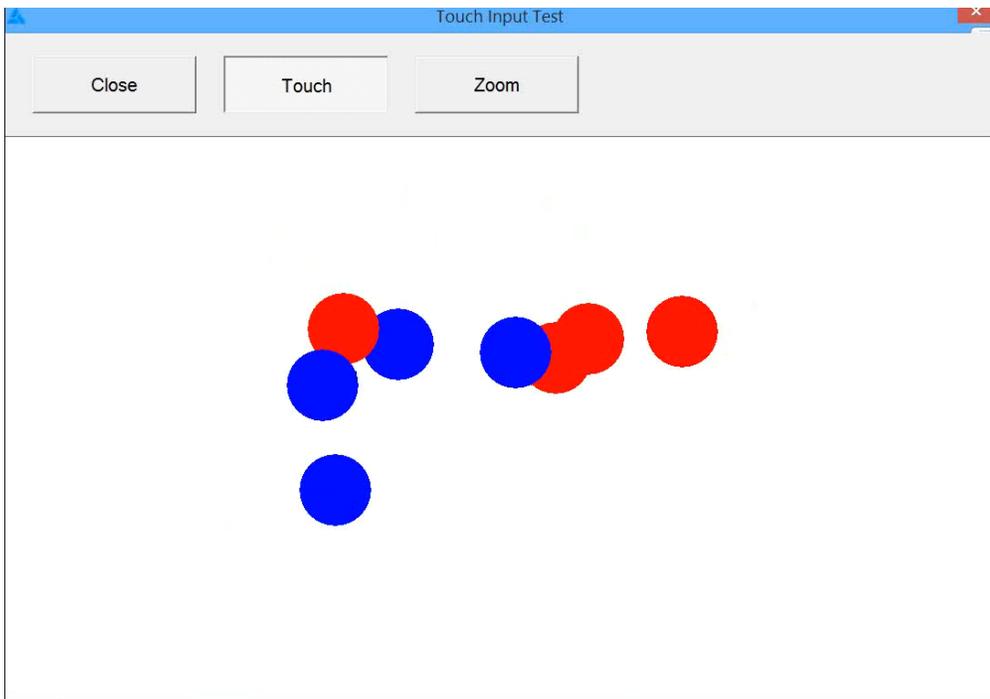
Clearly there's lots of good stuff to come!