

20120120 FB 5.7.1

FB 5.7.1 (like its predecessor 5.7) requires OS X 10.5 or higher.

Editor changes:

184 Cosmetic Source code drawn in project window
185 Error void functions don't show in function pop-ups
186 Cleanup Bad horiz scrolling of background window by mouse wheel

FBtoC changes:

343 Error gcc error from pointer.offsetConst\$ arg to toolbox Str255 param
505 Error internal error from dim a as ^Point, b&
558 Error Compiler error from block comment in BeginC...EndC
566 Error Comment ending in opt-L eats next line of code
617 Error inc(p) and p++ are different if p is ^Type
619 Error Make Xcode Project strips main() from command-line tool
666 Error 'dim as ..FooType bar' is pointer but should be Handle
667 Error Can't cast address arguments freely and correctly
669 Error Repeated 'clear local' gives internal fatal error
672 Error Build error 'no include path in which to search for Carbon/
Carbon.h'
673 Error Default compiler in OS X 10.7 should be clang
674 Error 'void clear local fn Foo as long' should be error
675 Feature Allow spaces in path to Developer folder
676 Error Can't cast to (float)
677 Error Record assignment wrongly disallowed
678 Error Return value from function of type float treated as integer
679 Error 'not(a binop b)' wrongly translated
680 Feature Maximum number of dynamic arrays doubled to 64
681 Error Allow record field as file specifier in 'open' statement
682 Feature Add 'Crash' button to all error alerts
683 Error Buffer overflow when linking huge project
684 Error Generate Localizable Strings fails when compiled as Objective-C
686 Error Unsigned function type wrongly disallowed
687 Error Crash from invalid syntax for 'button', 'appearance button' and
'appearance window'
688 Error FD_SpecialDirectoryXxxx() should create directory if absent

Note:

Projects and standalone builds that used clang with the precompiled header option will encounter an error when first built with FB 5.7.1

Error: clang:

redefinition of 'gFBDynArrayInfo' with a different type [line 115:14 of...]

The simplest workaround is to trash the build_temp folder. An alternative is to switch temporarily to another compiler.

New Examples:

FB_5_7_Examples/Graphics/CoreGraphics (Quartz)/SelfCenteringHIImageView

20111115 FB 5.7

FB 5.7 requires OS X 10.5 or higher.

Editor changes:

140 Error Tab key moves focus to toolbar and prevents subsequent editor window
typing
142 Error 'REM' slider in document window's toolbar misbehaves
162 Error Wrong indentation from opt-space between 'end' and 'fn|select|
record...'
174 Error Edit menu first item is always 'Can't Undo'
088 Feature Allow mouse wheel/trackpad scrolling of background window
177 Feature Headers ('H') button in doc window's toolbar
179 Feature Adding file to project should make copy if not in project folder

180 Feature Project menu item: New Project File...
181 Feature Help menu item: Search Apple Headers.app

FBtoC changes:

656 Error Hang from missing right parenthesis in 's\$ = edit\$(1'
650 Cleanup Deprecate type-identifier suffices (except '\$') on function names
651 Cleanup Deprecate same name for scalar and array variable: 'dim as long a, a(100)'
652 Cleanup Deprecate vars with same base-name but different type-identifier suffices: 'dim a%, a#, a\$...'
653 Cleanup Deprecate FB 16-bit 'int' type
657 Cleanup Passing pointer instead of record argument should be warning
654 Feature New keyword 'float' as synonym for 'single'
658 Feature Allow pass-by-value records in user-defined functions
665 Feature Allow C's dereferencing syntax for typed pointers
647* Feature New 'if.../else.../endif' syntax
671 Nicety Add Bundle identifier to default Info.plist

New Headers file:

Tlhx CFURLEnumerator.incl

Updated Headers files:

Tlhx CFURL.incl
Tlhx Controls.incl
Tlhx MacWindows.incl
Util_Containers.incl

New functions in Console runtime:

```
fn ConsolePrintCType( typeRef as CTypeRef ) // any CType  
fn ConsolePrintCFString( string as CFStringRef ) // CFString only; fast
```

New examples:

FB_5_7_Examples/Files/CFURLEnumerator
FB_5_7_Examples/Files/NSOpenPanel & NSSavePanel
FB_5_7_Examples/Files/Search Apple Headers
FB_5_7_Examples/Graphics/CoreGraphics (Quartz)/ImageEdit skeleton

* The new syntax:

```
if ( 1 == 1 )  
  beep  
else  
  stop  
end if
```

is equivalent to the traditional (and still supported) syntax:

```
long if ( 1 == 1 )  
  beep  
xelse  
  stop  
end if
```

20110912 FB 5.6.2

Major bug-fixes:

641 Error Crash from DynamicNextElement()
642 Error DynamicRemoveItems() attempts to remove non-existent items

Feature introducing type safety to FB:

621 Feature Allow compiler to warn of some type-mismatched pointer assignments

Cleaning up FB:

636 Cleanup Deprecate shorthands '& % |' for poke

637 Cleanup Deprecate 'enterproc ... exitproc'
638 Cleanup Disallow 'def' and 'usr' function declarations and calls

Improvements in translated C code:

622 Cosmetic Better translation of 'if (pointerVar) ...'
627 Cosmetic Pointers to scalar types should not be void*
628 Cosmetic Fewer parentheses in expressions with bitwise operators
634 Cosmetic Translate '++' as such, not '+= 1'
640 Cosmetic Translate 'rec = ptrVar' as 'rec = *ptrVar;'

Feature allowing improvement in translated C code:

635 Cosmetic Void keyword for functions ('void local fn Foo...')

Minor bug-fixes and other changes:

620 Error Function type mistranslated when ^Type or ^^Type
625 Feature Allow 'include "BarFolder:foo.c"'
626 Error Arguments to variadic functions should not be cast
639 Feature Use of 'fn ToolboxProcedure' as rval should be error
645 Cleanup Warn against fn CFSTR(stringVar)

New example:

FB_5_6_2_Examples/Controls/Custom text browser

20110827 FB 5.6.1

FBtoC general changes:

599 Feature Optional translation of _constants to symbols, not magic numbers
600 Feature New directive: compile [as] "Objective-C"
601 Feature New 'select switch' statement
603 Feature NULL keyword
615* Nicety Warn of long var dereferenced as though pointer
616† Nicety Warn of implied addition of _constants

* Until now, longs and pointers were treated almost interchangeably.

```
local fn bar( @foo& )  
    foo.nil& = 0  
end fn
```

This abuse is now deprecated.

⚠ Warning: long var 'foo' used as pointer in line 4 of ...

† The weird syntax '_foobar = _foo_bar' is now deprecated.

⚠ Warning: implied addition of constants; suggested form: '_foo + _bar' in ...

FBtoC changes relating to Make Xcode Project:

604 Error Resource files copied as empty data-fork by Make Xcode Project
607 Feature Warn of 'include library' framework not passed to Xcode project
609 Error Xib files wrongly converted to nib by Make Xcode Project
611 Feature Warn of library linker commands not passed to Xcode project
613 Error Nibs give ibtool error in Xcode 4 after Make Xcode Project

Updated Headers files:

Tlhx CarbonEvents.incl [fixes RegisterEventHotKey()]
Tlhx CFCharacterSet.incl [fixes CFCharacterSetXxxx constants]
Others too numerous to list.

New examples:

FB_5_6_1_Examples/Menus/CFStatusItem
FB_5_6_1_Examples/Miscellaneous/CalCalendar

Updated examples:

Too numerous to list.

Deleted example:

FB_5_6_x_Examples/Text/SpellCheck [crashes mysteriously]

20110722 FB 5.6

Editor feature:

New menu item Tools > Open Headers Folder

FBtoC bug-fixes and features:

591 Nicety Default compiler should be gcc 4.2
592 Nicety Show compiler path in error message when it cannot be found
593 Cosmetic Increase ConsoleWindow's height and font size
594 Feature Complex arithmetic, variables and functions
595 Error Wrong formatting of signed zero by 'using'
597 Cosmetic Change 'Max OS features' to 'Base SDK', matching Xcode
598 Error Crash after multiple 'input' in ConsoleWindow

New Headers files:

Tlhx CFCalendar.incl
Tlhx complex.incl
Tlhx MDItem.incl

Updated Headers files:

Tlhx CoreGraphics.incl now has CGDisplayFade functions
Util_CFPrefsCFStrings.incl now has CFPrefsGet/SetCGRect()

New examples:

FB_5_6_Examples/Calculations/complex arithmetic
FB_5_6_Examples/Cocoa/CocoaControls_noNIB
FB_5_6_Examples/Files/Metadata demo
FB_5_6_Examples/Miscellaneous/CFCalendar demo
FB_5_6_Examples/Miscellaneous/Fade screen to black
FB_5_6_Examples/Text/Print Columnar Data

Updated example:

FB_5_6_Examples/CoreFoundation/CFArray of Dicts Proj
FB_5_6_Examples/Miscellaneous/FBLog

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FB_5_6_Examples/Miscellaneous/CFCalendar demo
FB_5_6_Examples/Miscellaneous/Fade screen to black
FB_5_6_Examples/Text/Print Columnar Data

Updated example:

FB_5_6_Examples/CoreFoundation/CFArray of Dicts Proj

FB_5_6_Examples/Miscellaneous/FBLog

20110421 FB 5.5.1

Editor bug-fix:

167 Error Strange beep on double-clicking symbol preceded by option-space

FBtoC bug-fixes and features:

584 Error Freeze with 'Wrong number of arguments' error
585 Nicety More compact representation of 'data' strings
586 Error Crash on multi-line strings > 255 chars
588 Feature Advanced settings in drawer
588 Feature 'system long' should allow comma-separated variable list

Updated header:

Tlhx CoreGraphics.incl now includes CGImageSource functions

New examples:

FB_5_5_1_Examples/Cocoa/NoNib_FBtoCocoa
FB_5_5_1_Examples/Cocoa/NSTableView_FBtoCocoa
FB_5_5_1_Examples/Controls/bmpImage_btn/
FB_5_5_1_Examples/Controls/HICustomView
FB_5_5_1_Examples/Controls/ThumbnailButton/
FB_5_5_1_Examples/Games/Connect4/
FB_5_5_1_Examples/Graphics/CoreGraphics (Quartz)/CGPathContainsPoint
FB_5_5_1_Examples/Graphics/CoreGraphics (Quartz)/Floodfill
FB_5_5_1_Examples/Graphics/CoreGraphics (Quartz)/ImageResizer
FB_5_5_1_Examples/Text/CoreText styled text
FB_5_5_1_Examples/Text/CoreText with CGColor

Updated example:

FB_5_5_1_Examples/Games/Spandrel_1_4/

20110122 FB 5.5

Major changes:

[1] FutureBasic 5.app is now a self-contained IDE; its supporting file objects (FBtoC.app and the folders build_goodies and editor_support) are inside the app bundle.

[2] An Xcode project is created in the project source folder instead of build_temp as previously. This change makes it less liable to inadvertent deletion. The Xcode project is contained in a folder named <project_name>_XcodeProject.

[3] The User Libraries folder has moved to ~/Library/Application Support/FutureBasic/, alongside Scripts and Style Files.

FBtoC bug-fixes and features:

573 Error Hangs when parsing conditional with @nonexistent_var
574 Feature Make Xcode project in source folder, not build_temp
575 Error FlushWindowBuffer doesn't
576 Error apndstr() wrongly byte-swaps the count field
578 Error val() and val&() return wrong value for 16-digit hex strings
579 Error 'read' gets wrong value for 16-digit hex numbers in 'data' statement
581 Error Link error from Xcode project containing Objective-C code
582 Error NavDialog() releases saveFileName and message wrongly

New examples:

FB_5_5_Examples/Cocoa/DotView_FBtoCocoa
FB_5_5_Examples/Cocoa/GaussianBlur_demo
FB_5_5_Examples/Cocoa/SndPlayer_FBCocoa
FB_5_5_Examples/Controls/HISegmentedView
FB_5_5_Examples/Graphics/CoreGraphics (Quartz)/HIImageView_swipe
FB_5_5_Examples/Text/Programmatic HITextView

Updated example:

FB_5_4_9_Examples/Games/Spandrel_1_3

20101116 FB 5.4.8 and FBtoC 1.4.8

Editor bug-fix:

A long-standing 'dangling handle' bug has been found, that could cause a variety of crashes.

FBtoC bug fixes and new features:

570 Error Resources not passed to Xcode project
571 Error Make Xcode Project gives error 'FBtoC_Placeholder_RETURN' undeclared
572 Cleanup Code inflation by numerous gosub/returns*

New example:

FB_5_4_8_Examples/Controls/BrowserCustomItem

*The new implementation of gosub/return does not support optimized compilation. If your code uses gosub/return and needs optimization, you will have to replace every subroutine by an ordinary local fn.

20101008 FB 5.4.7 and FBtoC 1.4.7

FBtoC bug fixes and new features:

536 Cleanup Redundant files copied to XcodeProject
556 Cleanup Editor Errors window garbles multiple errors/comments on same line
557 Error gosub/return broken
559 Error route_toBuffer does not work with ConsoleWindow
560 Feature Support llvm-gcc 4.2 compiler
561 Error _controlkey constant missing
563 Feature Preference setting to control source-file combining

New Headers file:

Util_NibCFStrings.incl

New example:

FB_5_4_7_Examples/Sound/Record_sound_with_QuickTime

Updated examples:

FB_5_4_7_Examples/Games/Spandrel_1_2 (chess)

FB_5_4_7_Examples/Sound/Play Sound file

20100707 FB 5.4.6 and FBtoC 1.4.6

Editor changes:

Two new features mean that you will no longer lose your scripts and style files on updating to new versions of FutureBasic 5.

[1] Scripts now reside in ~/Library/Application Support/FutureBasic/Scripts. When the editor starts it looks for this folder. If the folder does not exist, it is created and the sample scripts are copied from the current editor_support folder.

[2] Style files now reside in ~/Library/Application Support/FutureBasic/Styles. When the editor starts it looks for this folder. If the folder does not exist, it is created and the style files are copied from the current editor_support folder.

FutureBasic 5 Help:

This now includes most of the material formerly contained in the FBtoC Help Book. The latter is largely obsolete.

FBtoC bug fixes and new features:

400 Error preprocessor bug for comments with quote char
463 Feature pass comments on to C source
519 Error Misleading error for missing project
522 Feature Strip unused FB runtime and C runtime functions when making Xcode

project
527 Nicety Cleaner translation of simple 'if' conditions
535 Nicety Make Xcode Project should set optimization -O0
538 Feature Send runtime errors to console.log instead of showing fatal alert
539 Cleanup Compiler warning from A\$ = "(?)"
540 Cleanup Warnings from Subs Quick Event Loop.Incl
541 Error write# stringVar gives strange results
542 Error 'line input #' should terminate on <lf> as well as <cr>
543 Feature Allow casting e.g. x = (double)y
544 Error instr() treats chr\$(0) and chr\$(1) alike
545 Feature Allow 64-bit integer literals such as 1ULL, -1LL
548 Error 'Warn of unused functions' sometimes didn't
549 Error FSCatalogInfo.permission wrongly defined in Headers
550 Error LP64 types should have size 8 in static expressions
553 Error inkey\$ for command line tool not implemented
554 Error 'Use precompiled header' breaks with clang 1.5
555 Feature Allow static string expression (_foo\$ + "bar") as 'output' filename

New Headers file:

Tltx CFNumberFormatter.incl

New examples:

FB_5_4_6_Examples/Controls/CustomShapedControl
FB_5_4_6_Examples/Controls/CustomDrawnControl (Quartz)
FB_5_4_6_Examples/CoreFoundation/PrintCFString
FB_5_4_6_Examples/Files/FileObjectPermissions

Updated examples:

FB_5_4_6_Examples/AppleScript/LaunchMailPressSendII
FB_5_4_6_Examples/Controls/CustomDrawnControl (QuickDraw)
FB_5_4_6_Examples/Files/Droplet apps/Accept folder drop
FB_5_4_6_Examples/Files/Droplet apps/FinderInfo
FB_5_4_6_Examples/Files/Droplet apps/FinderInfo replacement
FB_5_4_6_Examples/Games/Spandrel 1.1 (chess)

20100406 FB 5.4.5 and FBtoC 1.4.5

Editor changes:

[1] 'Find in Next File' item (Command-option-G) in Edit menu.
[2] A crash from typing '#if def _someLongConstant' is fixed.

FBtoC bug fixes and new features:

510 Error edit\$(without closing parenthesis crashes FBtoC
516 Error Dim syntax error not flagged
521 Error Function declared as Str63 is unusable
522 Feature Strip unused FB runtime and C runtime functions during Make Xcode
Project
523 Nicety Insert spaces around '*' in C translation of typed pointer parameters
524 Nicety Symbolise boolean constants in C translation
525 Nicety C translation should have NULL instead of (void*)(0)
526 Cleanup Remove trigraphs and their support
528 # Feature Option to build command line tool instead of app
530 # Feature Allow 64-bit compilation of command line tool
531 Feature Bounds checking should work for record fields that are arrays
532 Error Hang when parsing call to undefined function
533 Feature Allow dereference of pointer that is a record field and a pointer to
another record
537 Cleanup Remove thousands of obsolete predefined constants

see the 'tool' example below. Also see FB5 Help: Appendix J - Command Line Tools.

Function change:

GetFormattedDateTimeAsString() has been replaced by

```
DateFormatCreateStringWithAbsoluteTime().
Note the difference in parameter order:
//toolbox fn GetFormattedDateTimeAsString( CFAbsoluteTime at, CFStringRef
formatString ) = CFStringRef
toolbox fn DateFormatCreateStringWithAbsoluteTime( CFStringRef formatString,
CFAbsoluteTime at ) = CFStringRef
```

Revised Headers file:

```
Tltx HIView.incl [fixes definition of HIViewContentInfo]
```

New examples:

```
FB_5_4_5_Examples/Command Line Tool/tool
FB_5_4_5_Examples/CoreFoundation/CFString left, right, mid
FB_5_4_5_Examples/CoreFoundation/CFArray of Dicts Proj
FB_5_4_5_Examples/CoreFoundation/CFStrings in FB console
FB_5_4_5_Examples/Dialogs and Windows/Image View as window background
FB_5_4_5_Examples/Miscellaneous/CFDateFormatter test
```

Updated examples:

```
FB_5_4_5_Examples/Miscellaneous/DateExample
FB_5_4_5_Examples/CFPrefs Demos/CF string version/Prefs w/Nib & CE
FB_5_4_5_Examples/CoreFoundation/CFAdditions
FB_5_4_5_Examples/Games/Spandrel 1.0 (chess) [replaces RChess 3]
```

20100214 FB 5.4.4 and FBtoC 1.4.4

Editor changes:

- [1] Document windows are now live-resizing.
- [2] The text of items in the Errors window can now be copied with Command-C.
- [3] A text selection bug is fixed. It occurred when the mouse was dragged into the left margin. (Thanks to Robert C.)
- [4] Navigation arrows in the Help Book now work as expected.

FBtoC bug fixes:

```
414 Nicety 'Make Xcode Project' leaves stray .proj in build/NewProjectTemplate/
513 Error Mouse clicks in compositing window with FB Events and 'on mouse'
vector not detected
514 Error Orphan 'case' statement not identified as error
515 Error Xcode project template not deleted after Xcode project created
517 Error mki$ function can return wrong values
518 Error edit$( ef ) crashes if the field has not been created
520 Error Linker warning shows as pseudo error
```

New date\$ and time\$ functions:

These are now implemented via Core Foundation. They can optionally retrieve both the date and time in one call, and format it in almost any conceivably useful way. See FutureBasic 5 Help for details. The runtime code for date\$/time\$ may be called directly to format any date/time (not just the current one). See DateExample below.

New examples:

```
FB_5_4_4_Examples/Miscellaneous/DateExample
FB_5_4_4_Examples/Miscellaneous/DockTileBadge
FB_5_4_4_Examples/Files/EnumerateDirectory
FB_5_4_4_Examples/Files/Alias demo
FB_5_4_4_Examples/Text/CFAdditions
FB_5_4_4_Examples/Text/CFAdditions/CFScanner
```

Updated examples:

```
FB_5_4_4_Examples/Nib to FB wndNum & btnNum
FB_5_4_4_Examples/App with icon
FB_5_4_4_Examples/Games/RChess_3.0 [replacing RChess_3.0a2]
```

20091221 FB 5.4.3 and FBtoC 1.4.3

Important Changes for 5.4.3 (note: minor bug fixes and other internal fixes are not shown):

Type Description

- New new xib format support added. This is the newer XML nib used in Xcode.
New BeginCCode, BeginCFunction, BeginCDeclaration and EndC are improved methods for including C source directly..
 Many examples & documentation updated to use the new BeginCCode BeginCFunction BeginDeclaration keywords.
- New .c, .h, .m files are now selectable in "Add to project" file dialog.
New _FBConsoleWndNum constant allows Console window customization .
 The user may modify the default window in useful ways, for instance:
 include "ConsoleWindow"
 window _FBConsoleWndNum, "My tall debug stuff", (5,47)-(500,
system(_scrnHeight) - 5)
 See new console application demo in Examples/Games
- Fix open "A" and open "R" now create the file if it did not exist.
Fix Menu items ending with '!' or '^' or '<' or '/' no longer crash the app.
Fix Linker errors are now passed to editor

New examples:

FB_5_4_3_Examples > CarbonEvents > EventMonitorTarget
FB_5_4_3_Examples > Games > RChess_3.0a2

[20091107](#) [FB 5.4.2](#) and [FBtoC 1.4.2](#)

This release is being made early, because of the severity of bug #506 (introduced in 5.4.1).

Editor is unchanged.

Bug-fixes and minor features in FBtoC 1.4.2:

- 323 Error input "prompt"; x does not work in console mode
- 422 Error 'dim as long a\$' should be an error
- 467 Error gCntr = edit\$(1) should work for > 255 chars
- 471 Error missing '"' gives bad C code
- 484 Error bad C code from @"\"
- 493 Error str\$("should be translation error")
- 498 Nicety include "ConsoleWindow" (alternative to include "FBRuntime.incl")
- 499 Error str\$(fpNum) and 'print fpNum' give different results
- 500 Error prevent clang Universal build with <10.5 deployment
- 501 Error in Console Window, 'print fpNum' ignores gFBFloatMaxDigits
- 502 Error can't access 3D array in record
- 503 Error prevent array declaration with >4 dimensions
- 506 Error can't type upper-case letters in edit fields

New examples:

FB_5_4_2_Examples > Calculations > fast sin() and cos()
FB_5_4_2_Examples > Calculations > Expression Evaluator
FB_5_4_2_Examples > Calculations > Measurement of code performance

[20091021](#) [FB 5.4.1](#) and [FBtoC 1.4.1](#)

Main changes in FB 5.4.1

[1] Warnings for a common mistake: forgetting to assign a return value (end fn = someValue) to a function whose value is used elsewhere in the program.

```
local fn bar
dim as OSStatus err
err = _paramErr
end fn // oops, should have '= err'
```

```
dim as OSStatus err
err = fn bar
if ( err != _noErr ) then stop "bar() failed" // oops, never get here
```

```
?? Warning: Returned value of bar() is always 0 in line 9 of test.bas
?? Warning: Function should have explicit return value: bar()
```

[2] Choice of compiler. Build settings window has a pop-up menu with four options.

- gcc 4.0 is the default.
- gcc 4.2 is available on 10.5 and 10.6. It cannot build apps to run on 10.3 or 10.4.
- clang is available on 10.6 only. Very fast but somewhat flaky. Best used for development only (change to gcc 4.0 for release build).
- clang (analysis) performs static analysis of your code, giving interesting warnings; nothing is actually compiled.

Minor changes in Editor 5.4.1:

[1] The menu item Project > Remove Item has been deleted.
[2] Bug-fixes in the following areas: text drawing, menus, Find/Replace window.

Bug-fixes and minor features in FBtoC 1.4.1:

```
476     edit field with filter fn receives Cmd-chars
486     default MinOS deployment 10.4; remove 10.2 target from UI
490     >1-dimension array parameter wrongly translated
492     warn of unused fn prototypes as well as unused fns
494     allow fn instead of def and usr function calls
495     deprecate usr and def function calls
496     terabyte file access; lof(), loc() and rec() return SInt64
497     implement open "N" to give shared access
```

New examples:

```
FB_5_4_1_Examples > Graphics > QuickDraw > Image dithering
FB_5_4_1_Examples > Graphics > QuickDraw > Ray Tracing
FB_5_4_1_Examples > Graphics > CoreGraphics > CGGlyphs
```

[20090729 FutureBasic 5.3 and FBtoC 1.3](#)

Issues arising during beta testing of the editor have been resolved. Thanks to all who reported bugs.

Notable changes from FB 5.2:

1. Universal binary editor runs native on Intel.
2. Editor's Build Log shows progress of translation and subsequent build steps.
3. Editor doc windows are useable when toolbar hidden.
4. Editor has Help Book that in part describes FB5, not FB4.
5. New icons for editor, FBtoC, and FB documents (log out/in to see).
6. Find/Change window is resizeable.
7. Source code text is drawn with the casing in which it was typed.
8. New projects have extension .fbproj.

Note that FutureBasic 5.3 editor requires FBtoC 1.3 and vice versa; you can't mix and match with earlier versions.

Bug fixes and minor features in FBtoC:

```
421     Error          setting gFBQuit true in DoDialog() doesn't quit
443     Error          unhelpful error msg from malformed _constant
444     Error          string[pointer] should be translation error
445     Error          *.m files not copied during Make Xcode Project
446     Error          string stack bug from 'input z'
447     Feature        'Hide on suspend' preference checkbox
448     Error          Objective-C source files become *.m.m
450     Error          flag missing commas in argument list
452     Error          'Bad case statement' error could force recompilation
453     Feature        allow constants to start with numeral
455     Error          nested index with 'Check array bounds' gives various bugs
456     Feature        change 'Use DWARF' radio button to 'Put line # in app'
```

```
457 Error      .c, .m and .h files could open in FB when double-clicked
458 Error      edit$( btnNum ) returns nothing if text len > 255
459 Feature    Save Log As...
460 Nicety     'More warnings' should not include -Wunused-parameter
462 Feature    @"some
string" --> CFSTR( "some
string" )
464 Error      output window wrong for _btnClick in floating window
470 Nicety     explicit error for protoype illegally in local fn
```

New Headers files:

```
Util_CFUN.incl
Util_Nib.incl
```

New examples:

```
FB_5_3_Examples > Carbon in Cocoa
FB_5_3_Examples > Graphics > CoreGraphics (Quartz) > AceOfHearts, ImageMask and
ColorMask
FB_5_3_Examples > Files > Accept folder drop
```

Some old kludgy declarations in Toolbox CFDate.incl have changed to match the official Apple declarations:

```
CFGregorianDateIsValid()
CFGregorianDateGetAbsoluteTime()
CFAbsoluteTimeGetGregorianDate()
CFAbsoluteTimeAddGregorianUnits()
CFAbsoluteTimeGetDifferenceAsGregorianUnits()
```

[20090625 Beta version \(beta 03 \) of Universal FB Editor Available](#)

-----Overview-----

The FBtoC team is pleased to announce beta testing for a new universal binary version of the FB Editor. The beta editor is a conversion of the older editor (included with the 'FB_5_2_Package') and thus retains most of the old editor's basic design and functionality. Many of the changes are internal to facilitate a universal binary build but some features were upgraded. Please note: Even though there are many proposed (but not implemented yet) upgrades (many internal) to this new UB editor, the team believes putting a Universal editor in the hands of the FB community is a higher priority than waiting for a 'finished' product. Even though it seems unlikely Apple will remove support of Rosetta in OS X 10.6, they have yet to clarify if it will be included, so having a universal binary editor protects the FB community for now.

-----Changes-----

- (1) Feature: Look up of Apple toolbox calls in Xcode Docs by highlighting the call and using either the contextual menu or the help menu to initiate.
- (2) Bug fix: High level project level disclosure arrow (flipper) showed only "File" label when project closed & re-opened
- (3) Bug fix: Warnings and errors from gcc are mishandled by showDbClickedError() as reported by Andy P. and RC.

-----Installation-----

- (1) Unzip the executable which is named 'FutureBasic_5_3beta' ---do NOT rename
- (2) Put it in the same folder(which is typically 'FB_5_2_Package' for the current release of FB5) as your current 'FutureBasic 5' application.
- (3) Launch 'FutureBasic_5_3beta' instead of 'FutureBasic 5'

Notes:

- (a) The beta editor requires FB5 and does not support FB4 or older FB releases
- (b) The beta editor is built with debugging symbols turned on to provide more debugging information in the event of a failure. The included debugging symbols increase the size of the executable but should not otherwise impact operation.

[20090619 Beta version 02 of Universal FB Editor Available](#)

-----Overview-----

The FBtoC team is pleased to announce beta testing for a new universal binary version of the FB Editor. The beta editor is a conversion of the older editor (included with the 'FB_5_2_Package') and thus retains most of the old editor's basic design and functionality. Many of the changes are internal to facilitate a universal binary build but some features were upgraded. Please note: Even though there are many proposed (but not implemented yet) upgrades (many internal) to this new UB editor, the team believes putting a Universal editor in the hands of the FB community is a higher priority than waiting for a 'finished' product. Even though it seems unlikely Apple will remove support of Rosetta in OS X 10.6, they have yet to clarify if it will be included, so having a universal binary editor protects the FB community for now.

-----Fixes for Beta 02-----

[1] Crash at startup on PowerPC Mac in fn AddToTLBXList

The crash was the primary reason for releasing another beta so soon after the first beta.

[2] Compile info window doesn't show *.c files

[3] Match compile info format from FB 5.2

[4] Various changes to help menu to reinstate "Apple Web Reference" & other functionality

It is now possible to highlight an Apple toolbox call in the editor window and do a find on Apple's developer site by selecting "Apple Web Reference"

[5] Wrong fn name at top of editor window

[6] Initialize fn name and line info fields on doc open

[7] Re-opening a project should make the PM window front

[8] Help menu should allow access to miscellaneous files

[9] horiz scroll bug

[10] Compile Info window elides some <cr>s

-----Installation-----

(1) Unzip the executable which is named 'FutureBasic_5_3beta' ---do NOT rename

(2) Put it in the same folder(which is typically 'FB_5_2_Package' for the current release of FB5) as your current 'FutureBasic 5' application.

(3) Launch 'FutureBasic_5_3beta' instead of 'FutureBasic 5'

Notes:

(a) The beta editor requires FB5 and does not support FB4 or older FB releases

(b) The beta editor is built with debugging symbols turned on to provide more debugging information in the event of a failure. The included debugging symbols increase the size of the executable but should not otherwise impact operation.

-----Reporting Bugs-----

Post to the FB list with the subject: 'FB Editor: yourBug'

To speed the bug reporting process, please include basic environmental information with the bug post. For example, my post would start:

Intel iMac running OS X 10.5.7

[20090617 Beta version of Universal FB Editor Available](#)

-----Overview-----

The FBtoC team is pleased to announce beta testing for a new universal binary version of the FB Editor. The beta editor is a conversion of the older editor (included with the 'FB_5_2_Package') and thus retains most of the old editor's basic design and functionality. Many of the changes are internal to facilitate a universal binary build but some features were upgraded. Please note: Even though there are many proposed (but not implemented yet) upgrades (many internal) to this new UB editor, the team believes putting a Universal editor in the hands of the FB community is a higher priority than waiting for a 'finished' product. Even though it seems unlikely Apple will remove support of Rosetta in OS X 10.6, they have yet to clarify if it will be included, so having a universal binary editor protects the FB community for now.

-----Regarding Beta Status-----

Please note: this editor is a ***** BETA *****. This should NOT be interpreted as

'release'. There are identified unfixed bugs and new bugs/failures are possible. Proceed accordingly with saving your work, backups etc.

-----Changes-----

(1) Mac Intel users will generally notice a lot more zip because of the native executable. Speed increases for opening files (via double clicks on projects/files and via open dialogs) is particularly noticeable for me.

(2) The Find/Change dialog was improved and now works more reliably. Also, the Find/Change window is resizable.

(3) The split window (index on left) help window is used to display help. The content of help has been revamped to reflect FB5 instead of older FB, but is not complete and a work in progress. Other help manuals used to be available on the help window but are not in this version. Again, in progress.

(4) Several broken features in the old editor were fixed. For example, quadruple click on a long if now correctly highlights the entire structure from long if to end if. This also works for similar Start/End structures like while/wend, local fn/end fn etc.

-----Installation-----

- (1) Unzip the executable which is named 'FutureBasic_5_3beta' ---do NOT rename
- (2) Put it in the same folder(which is typically 'FB_5_2_Package' for the current release of FB5) as your current 'FutureBasic 5' application.
- (3) Launch 'FutureBasic_5_3beta' instead of 'FutureBasic 5'

Notes:

- (a) The beta editor requires FB5 and does not support FB4 or older FB releases
- (b) The beta editor is built with debugging symbols turned on to provide more debugging information in the event of a failure. The included debugging symbols increase the size of the executable but should not otherwise impact operation.

20090612 FutureBasic 5.2 and FBtoC 1.2

Editor is unchanged.

Bug fixes in FBtoC:

431	Closed	string stack bug from 'open "0", 1, name, @parFSRef'
432	Closed	'include "foo.c"' could give bad C code
433	Closed	log window shrinks each time FBtoC is launched
435	Closed	out-of-order menu items become spacers
436	Closed	hang from 'if 1 then pen 1 else pen 2'
437	Closed	Overlong path to project file should give helpful error
438	Closed	allow 16 parameters in function definitions
439	Closed	array bounds error translating 'for i=1to 6'
441	Closed	spurious translation error from 'stop fSpec.name'
442	Closed	stale gcc warning shown by editor

New feature:

p.0@ dereferences a pointer to a 64-bit integer (like p.0& for 32 bit)

New examples:

FB_5_2_Examples > Graphics > OpenGL > OpenGLTestBed
FB_5_2_Examples > Graphics > QuickDraw > (de)convolve img
FB_5_2_Examples > Miscellaneous > SortDescriptor

20090321 FutureBasic 5.1.5 and FBtoC 1.1.10

Editor changes:

- [1] An unsaved standalone file can now be built and run (Command-R); see note 1 below.
- [2] Compile Info window shows progress of both translation and compilation.

Bug fixes in FBtoC 1.1.10:

```
426    Closed    inkey$ does not return
427    Closed    val&( "01" ) and val&( " 1" ) should return 1
428    Closed    spurious error from 'if...then edit$(1) = "" else stop'
429    Closed    'text' statement with no parameters hangs FBtoC
430    Closed    Tlbx glu.incl could not be included
```

New example:

```
FB_5_1_5_Examples > Text > HITextView+FontPanel > HITextView
```

An HITextView with the FontPanel allows multistyled text with shadow, colour, double-underline and other eye-candy.

Note 1:

This is a normal Run in every way, except that the various files required by FBtoC are in your TemporaryItems folder, which (in OS X 10.5) is somewhere like /private/var/folders/88/88AKX+F62RWmd++8ZOxBkU+++TI/TemporaryItems.

20090216 FutureBasic 5.1.4 and FBtoC 1.1.9

Editor 5.1.4 changes

1. Scripts '#if 1/#endif' and '#if 0/#endif' fixed.

FBtoC 1.1.9 changes

1. Typed functions without a suffix are allowed, for example
 local fn Name as Str255
 end fn = "Ann"
2. FB4 kludges removed from toolbox declarations (see below).
3. The setting 'Use precompiled header' works for universal builds.
4. The build system determines which pieces of a large program need to be compiled, and compiles only those pieces.

Bug fixes

```
415    Closed    Make Xcode Project wrongly quotes/escapes nib names
417    Closed    dropping file on FBtoC spoils log window position
420    Closed    Allow files with no OSType to be opened.
424    Closed    input # bug
425    Closed    record # should set file mark when extending
```

FB4 kludges removed

The Carbon C definition of these five functions includes a 64-bit parameter, which in FB4 had to be split into two 32-bit halves:

```
HIViewFindByID()
HIViewSetID() // rarely used
CreateMouseTrackingRegion()
HIViewNewTrackingArea()
HIViewChangeFeatures() // rarely used
```

You will have to change your code from, for example:

```
fn HIViewFindByID( fn HIViewGetRoot( w ), myHIViewID.signature, myHIViewID.id,
@myView ) // old syntax
```

to the simpler correct form:

```
fn HIViewFindByID( fn HIViewGetRoot( w ), myHIViewID, @myView ) // FB5.1.4 syntax
```

20090109 FutureBasic 5.1.3 and FBtoC 1.1.8

Editor 5.1.3 is unchanged from 5.1.2.

FBtoC 1.1.8 changes:

'on FinderInfo fn Xxx' implemented [see FB_5_1_3_Examples > Files > FinderInfo]
The Headers file Util_CE.incl has been extensively commented for easier use.

New Headers files and examples:

```
-----
Util_EUTCKeyFilter.incl [see FB_5_1_3_Examples > Text > EUTC Key filter]
Util_Toolbar.incl      [see FB_5_1_3_Examples > Carbon Toolbar > The easy way]
Tlxb_HITheme.incl     [see FB_5_1_3_Examples > Controls > HITheme_demos]
Tlxb_CoreText.incl    [see FB_5_1_3_Examples > Text > CoreText xxxx]
```

CoreGraphics headers changes

The special FB4 syntax for a handful of CG functions (CGRectMake, CGRectOffset, CGContextGetCTM ...) has been discarded. You will need to change the way you call these functions in your source code. For example:

```
fn CGRectMake( r, 0.0, 0.0, 10.0, 20.0 ) // old FB4 syntax
r = fn CGRectMake( 0.0, 0.0, 10.0, 20.0 ) // new FB5 syntax similar to C
```

Additions to the CG headers:

```
CGDataProvider.incl
CGError.incl
CGFont.incl
CGGradient.incl
CGPath.incl
CGPDFArray.incl
CGPDFDictionary.incl
CGPDFDocument.incl
CGPDFObject.incl
CGPDFPage.incl
CGPDFStream.incl
CGPDFString.incl
```

The FB4 'local fn' wrappers have been removed from all CoreGraphics functions. This change makes 'fn' optional when calling CG procedures (functions that do not return a value).

```
fn CGContextFillRect( ctx, r ) // 'fn' formerly required; now optional
CGContextFillRect( ctx, r ) // new simpler syntax
```

Bug-fixes:

370 button statements uncheck a checked checkbox
404 scroll button mishandles Rect param at creation
406 key chars with high bit set are negative in _evKeys dialog event
409 I-beam cursor persists after click in FBtoC Log window
410 gcc error from struct/record field named 'index'
412 gcc error from pi if prefs 'Allow dim a#,a\$,a%'
413 val&() should return 0 if first char is alphabetic

[20081117 FutureBasic 5.1.2 and FBtoC 1.1.6](#)

Important change in HandleEvents

The default behaviour of HandleEvents is now to block (i.e. not return) unless an event is dispatched.

It is no longer necessary (but is harmless), to suppress null events with:
poke long event - 8, 0xFFFFFFFF // no null events

The original behaviour of returning 30 times a second, if required for old polling code, can be restored by:

```
poke long event - 8, 2 // null events every 2 ticks, like FB4
do
fn PollForSomething
HandleEvents
until gFBQuit
```

Editor (FutureBasic 5.1.2) changes

Fixes to text display in the Errors window.
A bug has been fixed that caused the cursor to change to an arrow over the Scripts

Palette even when the latter was hidden.

FBtoC 1.1.6 changes

- 1. Default behaviour of HandleEvents changed.
- 2. The rarely-used 'system' statement is no longer equivalent to 'end'. Please change your code to use 'end'.
- 3. The 'menu' statement now allows an optional 5th parameter (commandID).
- 4. New/revised Headers files: Tlxb CFBase.incl, Tlxb CFString.incl, Tlxb CFArray.incl, Tlxb CFData.incl, Tlxb CFDate.incl, Tlxb CFNumber.incl. These header files are more complete than previously; if you get redefined function errors for your own CFxxxx declarations, just comment out your declarations.
- 5. New Headers file: Util_Containers.incl [for use see FB_5_1_2_Examples > Containers > Util_Containers example].
- 6. New Headers file: Util_Toolbar.incl [for use see FB_5_1_2_Examples > Carbon Toolbar > Toolbar Example].
- 7. FB_5_1_2_Examples > Sorting [FB3/FB4 CD examples updated for FB5]
- 8. build_temp folders created by FBtoC are excluded from Time Machine backups.

Bug fixes

- 390 Closed left\$\$, mid\$\$, right\$\$ give _zTrue when comparing chars
- 391 Closed mid\$\$ (c, 1) gives "comma expected error"
- 392 Closed scrollbar of console app lacks down-arrow
- 393 Closed garbled error from proc "NoSuchFunction"
- 394 Closed prHndl..prInfo.rPage fields are byte-reversed on Intel
- 396 Closed default edit field is _framedNoCR instead of _framed
- 398 Closed can't access 2-D array inside record
- 399 Closed def apndstr has endian bug (on Intel)
- 401 Closed crash from print after front window closed
- 402 Closed 'Array bounds error' alert shows as 'Quit'

20081020 FutureBasic 5.1.1 and FBtoC 1.1.5

Editor (FutureBasic 5.1.1) changes

- 1. Script Palette replaces Script submenus.
- 2. Project window has Headers button, which opens the Headers folder in the Finder.

FBtoC 1.1.5 changes

- 1. New File menu item: Make Xcode Project.
- 2. New feature and setting: Warn of unused functions.
- 3. Domain and folder type constants (_kUserDomain, _kApplicationSupportFolderType...) are now defined.
- 4. New Headers file Util_CE.incl provides a simplified method to implement Carbon Events in your code; for demos see FB_5_1_1_Examples > CarbonEvents.

Bug fixes

- 314 Closed make strings in *.c runtime localizable
- 378 Closed elided error message from include library "NoSuchFile"
- 381 Closed editor ignores some translation errors
- 382 Closed aliased source file prevents translation of main
- 383 Closed editor's Stop button does not affect build by FBtoC
- 384 Closed I-beam cursor stays after click in Prefs 'More gcc options'
- 385 Closed unusable CreateMouseTrackingRegion() in Tlxb CarbonEvents.incl
- 386 Closed 'picH = picture' gives translation error
- 387 Closed _useWFont fails for some appearance buttons

20090924 FutureBasic 5.1 and FBtoC 1.1.4

Important change in FBtoC

Until now, the build process would automatically copy every nib (*.nib) from the source folder into the built app package. This greedy and surreptitious copy risked the inadvertent inclusion of files like "OldRubbish.nib" and "embarrassingly bad.nib". Now, nibs are ignored unless specified in an 'include resources' statement or in the editor

project window (see below).

This means that every project or standalone file that uses a nib interface needs modification. The most straightforward fix is to add a line of code resembling this:
include resources "main.nib"
for each nib used by your project.

Editor (FutureBasic 5.1) changes

1. New menu items give better integration with FBtoC

[20080912 FutureBasic 5 and FBtoC 1.1.3](#)

The FutureBasic 5 editor is FBtoC-only as previously discussed.

After downloading the FB 5 package, please double-click FBtoC.app then click Open in the "downloaded from the Internet" warning dialog. Otherwise this dialog may interfere with your first Run from the editor.

[20080722 FBtoC 1.1.2](#)

1.1.2 build 140

Two helpful additions:

- [1] VAList - Variable number of function arguments support and examples added
- [2] FBShell - Basic program shell with more modern nib and carbon events

Bug Fixes:

- 362 Closed 140 Error if 1 then does not produce FBtoC error message
- 363 Closed 140 Error menu 127, 1, _disable does not work in FBtoC
- 364 Closed 140 Error Menu cmd keys don't auto repeat when created with FB menu statement
- 366 Closed 140 Error Record# should extend fork size without error

[20080618 FBtoC 1.1.1](#)

New Features:

- (1) The new NavDialog function, an FBtoC-only option, is similar to the FB Files\$ keyword but provides substantially more functionality. NavDialog offers new functionality via Navigation Services but the details are hidden in the C runtime, so it is easy to call NavDialog (and several other NavDialogxxxxxx helper functions). Several resources are available for learning to use NavDialog(). They are:
 - (a) The demos - see Examples/Files/NavDialog_Demos,
 - (b) FBtoC help - see Language Enhancements
 - (c) Browsing the NavDialogxxxxxx functions in FilesDollarFunction.c and some new FSRef / CFURL helpers in FileHandling.c (both in the build_goodies folder)
- (2) FBtoC now uses NavDialog(_kNavDialogChooseFile + _kNavDialogSheet,...) internally.
- (3) FBtoC Help for include statement revised
- (4) Internal AppleScript arrangements simplified for debugging in Xcode

Bug Fixes:

- 246 Closed PM sheets beep in FBtoC-built app
- 359 Closed Appearance button btnNum, _activeBtn did nothing
- 360 Closed NavDialog sheets retract at once

Closed files\$(_FSRefSave,...) now returns parent folder ref always
361 Closed open "0", 1, s, @fsRef fails if fsRef is parent folder but file exists
362 Closed Architecture: Current Mac should disable OS min/max pop-ups

[20080525 FB 4.4.3](#)

The change most folks will appreciate is the ability to compile directly with either

the FBtoC translator/gcc compiler or with the FB compiler. It is available now on the command menu.

Download FB 4.4.3 here

New Features for FutureBASIC 4.4.3 (aka: changes since 4.4.2)

4.4.3 (24 May 2008)

[1] Command menu has Run [FBtoC]

Note: if you're planning to use the new Run [FBtoC] command from within the FB Editor, please refer to the "Connecting to FBtoC" document for one-time setup steps.

[2] Obsolete 680x0 and FAT items removed from command menu

[3] New Headers files, matching FBtoC:

Subs FloatByteSwapping.incl

Tltx AppleHelp.incl

Util_AppleHelp.incl

[4] Rntm Appearance.incl update fixes little-arrows-wrong-way-counting

[5] Subs Appearance Btns.Incl update supports viewsize for scroll bars.

[6] Subs Compiler.Incl update suppresses double-beep when adding too much text to an edit field.

[7] Subs Graphics.incl fixed for PPC compile.

[8] Definition of CFStringAppendPascalString corrected in Tltx CFString.incl.

[9] FB Compiler v4.6 no longer emits "Warning: Your source code is ignoring the result of this toolbox function".

Special note for OS X 10.5 users

Before using FB 4.4.3 for the first time, locate the new FB Compiler.app in the Finder (the path is: FB_pkg_4_4_3/FB Extensions/Compiler/FB Compiler.app) and launch it by double-clicking its icon. If an alert appears ("FB Compiler.app is an application which was downloaded from the Internet. Are you sure you want to open it?"), click the Open button.

P.S. Currently, the 4.4.3 version is only available in English.

20080524 FBtoC 1.1

New features:

[1] files\$ supports _FSRefFolder and _CFURLRefFolder as alternatives to _FSSpecFolder.

See Examples > Files > open/files\$ FSSpec/FSRef/CFURLRef

[2] MakeIntoFBWindow() has been improved to handle tracking controls correctly (scroll bars, little-arrows and sliders, both live and non-live).

The improvements required the code to be moved to the C runtime instead of being user FB code.

See Examples > Nib to FB wndNum & btnNum > Nib demo.bas

See also NibToFB.incl in the same folder, in which MakeIntoFBWindow() is now declared:

toolbox MakeIntoFBWindow(WindowRef w, SInt32 wNum)

The syntax fn MakeIntoFBWindow(wRef, wNum) is unchanged.

[3] FBtoC can now be invoked from the FutureBASIC editor (v4.4.3 whose release is expected soon).

New Header files:

Tltx AppleHelp.incl and Util_AppleHelp.incl

Bug fixes:

355 Closed files\$(_FSSpecFolder,...) should produce no-name variant FSSpec

356 Closed nib sliders and little-arrows don't send dialog events

357 Closed edit\$(n) = "ABC" blows string stack

358 Closed 'input #1, longvar' gives 0 for -ve number strings

This procedure converts a nib-based window and its controls to behave as though created programmatically with 'appearance window' and 'appearance button' statements. After a call to MakeIntoFBWindow(), the window has an FB wNum and its controls have FB btnNums, and generate FB dialog events.

20080508 FBtoC 1.0.9

The 1.0.9 release of FBtoC (English only) repairs some important bugs. The French localization, already outdated in 1.0.8, became severely dysfunctional in 1.0.9 and has been temporarily removed.

Bug fixes:

351 Closed 'input #fileID, stringVar, singleVar, doubleVar' gives null string and 0s
352 Closed 'on mouse fn DoMouse' interferes with button handling
353 Closed little-arrows and sliders should give correct FB dialog events
354 Closed 'edit field' blows string stack

20080424 FBtoC 1.0.8

New special constant `_forLoopsAlwaysExecutedAtLeastOnce`:

```
for j = 1 to 0
  print "Never get here"
next
override _forLoopsAlwaysExecutedAtLeastOnce = _true
for j = 1 to 0
  print "Do get here (legacy FB behaviour)"
next
```

Division symbols:

/ and double-backslash: always mean the same thing (integer division if appropriate)
\ always means force floating point division

Bug fixes:

345 Closed close box doesn't close window
347 Closed performance issue with container += string + string
348 Closed crash from `edit$(1, _maxInt, _maxInt) = "a"`
349 Closed performance issue with `hex$()`

20080327 FBtoC 1.0.7

New feature:

- for/next loops may be executed zero times

```
for j = 1 to 0
  print "Never get here"
next
```

New examples:

Examples > Calculations > Counting for 1 second
Examples > CoreGraphics (Quartz) > CGBitmap demo

New documentation:

Build system `catching.rtf` [a file in the `FBtoC_1.0.7` folder]

Bug fixes:

284 Closed can't assign a string const to another
327 Closed 'print myUInt64Var/1024/1024/1024' prints 0
336 Closed line continuation bug
337 Closed `def open "TYPE"` does nothing
338 Closed default file type should be 'TEXT'
339 Closed crash from 'print test.r.left'
342 Closed some labels become illegal C code
344 Closed wrong number of decimal places sometimes printed

Open bugs:

314 Open make strings in *.c runtime localizable
323 Open input "prompt"; x does not work in console mode
343 Open gcc error from `pointer.offsetConst$ arg` to toolbox `Str255` param

20080307 FBtoC 1.0.6

New feature:

- menu item "Move build_temp to Trash"

New examples:

Examples > Mandelbrot set

Examples > Carbon Toolbar > Toolbar.proj

Bug fixes:

077 Closed fix the 'as pointer/Handle to type' mess

212 Closed crash when global var 'err' is used (OS X 10.4)

216 Closed app gets generic icon if project name contains '&'

329 Closed 'stop' decrements the string stack

330 Closed 'picture' statement can crash in OS X 10.2.8

331 Closed gcc error from global vars j0, j1, jn, y0, y1, yn

332 Closed Template error if FB-built app is in source directory

333 Closed spurious error from 'long color' inside 'long if' block

334 Closed error: 'index' redeclared as different kind of symbol

Notes:

With bug #077 closed, you can now write code like this:

```
'-----
```

```
#define MyFunkyType as Handle to Rect
```

```
begin record DemoRec
```

```
dim as MyFunkyType h1, h2
```

```
dim as pointer to Rect p1, p2
```

```
end record
```

```
dim as DemoRec myFunkyVar
```

```
myFunkyVar.h1 = fn NewHandle( sizeof( Rect ) )
```

```
myFunkyVar.h1..top = 99
```

```
'-----
```

which was impossible in FB owing to bugs (that remained unfixed throughout the compiler's entire lifespan).

FBtoC also fixes this related FB bug:

```
'-----
```

```
dim myPtrToSpec as .FSSpec
```

```
print "Should be 4 because it's pointer:", sizeof( myPtrToSpec )
```

```
'-----
```

20080222 FBtoC 1.0.5

New features:

- French localization of FBtoC

- simplified debugging with Xcode, via menu item File > Debug Last App

New example:

Examples > Debug > DemoCrash

DemoCrash crashes at the line:

```
poke address, value.
```

When run under Xcode's debugger, the crashing code and variable values are shown

20080205 FBtoC 1.0.4

New features:

on edit fn MyDoEdit

tekey\$ function

support for localization of string literals

New example:
Localizable strings

Bugs fixed:

304 Closed int(1/3*100) evaluates as 0
306 Closed print #fileID spc(10) prints nothing to file
307 Closed comma-tabling and tab() broken for print #fileID
308 Closed remember Finder-dropped file for 'Open Last File' command
310 Closed pos(fileID) returns nonsense
311 Closed closing a _scrollVert button makes window(_width) off by 1
313 Closed close box should not close window if 'on dialog fn
DoDialog' is in effect
318 Closed text statement can't be followed by a colon
319 Closed gcc warning from picture statements
320 Closed inc() / dec() can't be applied to record fields

20080129 FBtoC 1.0.3

Updated Headers file:
CFIndex.incl

Bugs closed:

279 Closed _scrollVert and _scrollHoriz scroll buttons not fully working
301 Closed custom-sized string vars can wrongly be Str255
302 Closed button value can't be set with 'appearance button...'
303 Closed files\$(_FSSpecFolder...) returns invalid FSSpec

20080126 FBtoC 1.0.2

Updated Headers file:
CFIndex.incl

New feature:

_scrollVert and _scrollHoriz scroll buttons can now be created. They resize automatically with the window. But the apparent window size (from window(_width) etc) is not yet adjusted for presence of scroll bars.

Bugs closed:

283 Closed problems from source file with long name
293 Closed allow drag and drop from Finder
296 Closed 'input' gets character on key-up
297 Closed DIM 4 MTBold% should be a translation error
298 Closed _wndRefresh, _wndActivate FB events not received
299 Closed 'unterminated comment' gcc error for some division expressions
300 Closed FB dialog handler signals _evKey instead of _evCmdKey

20080116 FBtoC 1.0.1

Now implemented:

page lprint, read dynamic, write dynamic, scroll

New section in FBtoC Help:
Byte order

Headers files now available:
Subs AppleScript.incl, Tltx CFByteOrder.incl

Bugs closed:

285 Closed 'window 1' resets print position to top left
287 Closed 'on mouse' disabled
289 Closed printed text wrongly split over several lines
292 Closed built app has old creation date
294 Closed last member of STR# resource not retrieved
295 Closed crash from input "test"; x

20080102 FBtoC 1.0

Changes since preview 1a126:

Translates 'on timer fn DoTimer'

SInt64 and UInt64 are now integer types, not records

Bugs closed:

265 'dim dynamic' fails for custom-sized string array

281 custom-sized string vars can't be suffixed with '\$'

282 allow kEventRawKeyRepeat to reach fn DoDialog as _evKey