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wxWidgets Change Log

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Note: This file contains the list of changes since wxWidgets 3.x, please see

docs/changes\_30.txt for the changes in the previous versions.

INCOMPATIBLE CHANGES SINCE 3.0.x:

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Changes in behaviour not resulting in compilation errors

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- wxRibbonButtonBar::DeleteButton() now deletes and not just removes the button.

- Default interpolation mode in wxGDIPlusContext under MSW is now

wxINTERPOLATION\_DEFAULT and not wxINTERPOLATION\_GOOD as in 3.0 for

consistency with OS X, call SetInterpolationQuality() explicitly if needed.

- Calling wxYield() in wxMSW now generates wxEVT\_IDLE events, just as in the

other ports, but this can be unexpected for the applications not expecting

their idle handlers to be called from inside wxYield().

- Creating wxBitmap with 0 width or height now always fails in all ports

(it used to succeed in wxMSW).

- Using invalid flags with wxBoxSizer or wxGridSizer items now triggers asserts

when done from the code or error messages when done in XRC.

- wxWS\_EX\_VALIDATE\_RECURSIVELY is now the default behaviour, i.e. calling

Validate() or TransferData{From,To}Window() will now also call the same

function for all children.

- wxOSX/Carbon port doesn't exist any more, wxOSX/Cocoa will be silently used

instead even if configure --with-osx\_carbon option is used.

- The pure virtual function wxAppTrait::GetToolkitVersion() now has a parameter

for getting the micro version. If you override GetToolkitVersion() you need

to add this new third parameter.

- wxWindow::CreateAccessible() doesn't return accessible object by default

anymore and GetOrCreateAccessible() may return NULL, indicating that native

system-provided accessibility should be used.

Changes in behaviour which may result in build errors

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- "webview" library is not included in `wx-config --libs` output any more, you

need to request it explicitly, e.g. `wx-config --libs std,webview`.

- wxMSW now requires linking with uxtheme.lib, shlwapi.lib and version.lib.

This is done automatically in most cases, but if you use a static build of

the library with a non-MSVC compiler such as MinGW and do not use wx-config,

then you will need to add these libraries to your make or project files

yourself.

- WXWIN\_OS\_DESCRIPTION doesn't exist any longer, use wxGetOsDescription().

- Never documented and not always available private wxGetClipboardData()

function now doesn't exist at all any more in wxMSW, use wxClipboard instead.

- wxGraphicsRenderer::CreatePen() now takes wxGraphicsPenInfo and not a wxPen.

This only affects code defining its own custom renderers, code just using

wxGraphicsContext::CreatePen() continues to compile and work as before.

3.1.1: (released 2018-02-19)

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INCOMPATIBLE CHANGES SINCE 3.1.0:

- wxListCtrl::HasCheckboxes() and EnableCheckboxes(), which were added in

3.1.0, have been renamed to HasCheckBoxes and EnableCheckBoxes respectively

for consistency with wxCheckBox naming.

- The enum value wxTASKBAR\_JUMP\_LIST\_DESTIONATION, which was added in 3.1.0,

contains a typo and has been renamed to wxTASKBAR\_JUMP\_LIST\_DESTINATION.

- wxZipOutputStream will now automatically convert filenames to UTF-8, if the

wxMBConv used when calling the constructor supports UTF-8 encoding.

All:

- Add CMake-based build system (Tobias Taschner).

- Add wxSecretStore for storing passwords using the OS-provided facilities.

- Add support for compiling application code with wxNO\_UNSAFE\_WXSTRING\_CONV.

- Add support for translating strings in different contexts (RickS).

- Add wxDateTime::GetFirstWeekDay() (Lauri Nurmi).

- Add support for the micro version (third component) to OS and toolkit version

functions. See wxGetOsVersion(), wxPlatformInfo, and wxAppTraits.

- wxLogInfo() now logs messages if the log level is high enough, even without

wxLog::SetVerbose() which now only affects wxLogVerbose().

- Add wxFileType::GetExpandedCommand() (troelsk).

- Make it easier to convert to/from UTF-8-encoded std::string (ARATA Mizuki).

- Support custom conversions in wxLogStream and wxLogStderr (Lauri Nurmi).

- Add support for loading dynamic lexer in wxStyledTextCtrl (New Pagodi).

- Handle strings with embedded NULs in wxDataStream (Nitch).

- Don't crash in wxTextFile::GetLastLine() if the file is empty (crohr).

- Add wxString::cbegin() and cend() method (Lauri Nurmi).

- Allow using Bind() with event handlers non-publicly deriving from

wxEvtHandler and/or wxTrackable in C++11 code (Raul Tambre, mmarsan).

- Update bundled expat to 2.2.0 (Catalin Raceanu).

- Add wxCMD\_LINE\_HIDDEN wxCmdLineParser flag (Lauri Nurmi).

- Fix wxRmdir() with non-ASCII paths (trivia21).

- Don't crash in wxFFile::Eof() or Error() on closed file (jprotopopov).

- Add UTF-8 support to wxZipOutputStream (Tobias Taschner).

- Update all bundled 3rd party libraries to their latest versions.

- Use unique prefix for all zlib symbols to avoid link conflicts.

- Make wxFile::ReadAll() work for unseekable files too.

- Correct UTF-8 encoding of U+FFFF (axiom).

All (GUI):

- Allow wxWebView::RunScript() return values (Jose Lorenzo, GSoC 2017).

- Allow using fractional pen widths with wxGraphicsContext (Adrien Tétar).

- Add support for loading fonts from external files (Arthur Norman).

- Add support for using arbitrary windows as wxStaticBox labels.

- Improve wxSVGFileDC to support more of wxDC API (Maarten Bent).

- Add support for wxAuiManager and wxAuiPaneInfo to XRC (Andrea Zanellato).

- Add XRC handler for wxSpinCtrlDouble (Trylz).

- Add support for wxSL\_MIN\_MAX\_LABELS and wxSL\_VALUE\_LABEL to XRC (ousnius).

- Update Scintilla to v3.7.2 (NewPagodi, Paul Kulchenko).

- Update bundled libpng to 1.6.28 (Catalin Raceanu).

- Automatically determine first day of the week in wxCalendarCtrl (Lauri Nurmi).

- Fix vertical scrollbar visibility in wxStyledTextCtrl (yenwu, NewPagodi).

- Fix bug with not being able to select AUI tab after dragging.

- Make wxDataViewCtrl::Expand() expand ancestors in native ports too.

- Add wxDataViewTextRenderer::EnableMarkup().

- Add wxDataViewCtrl::SetHeaderAttr().

- Add wxDataViewCtrl::GetTopItem() and GetCountPerPage() (Andreas Falkenhahn).

- Add wxListCtrl::SetHeaderAttr().

- Add support for using markup in wxDataViewCtrl text items.

- Implement auto complete in generic wxSearchCtrl (Eric Jensen).

- Fix preserving selection when changing selection mode in wxGrid (jonkraber).

- Fix wxTextEntry::SetHint() with wxTE\_PASSWORD in generic implementation.

- Many fixes and improvements in Direct2D, Cairo, and GDI+ graphics renderers.

- Fix and unify clipping region support for MSW and GTK+.

- Fix rescaling of wxImage.

- Fix displaying edited value of wxUIntProperty (wxPropertyGrid).

- Fix displaying validation errors for numeric wxPropertyGrid properties.

- Add wxSYS\_CARET\_{ON,OFF,TIMEOUT}\_MSEC system settings (brawer).

- Add wxGraphicsContext::GetClipBox().

- Fix wxGCDC::Clear() for rotated graphics context.

- Fix wxGCDC::GetClippingBox() for transformed wxDC.

- Add support for affine transformation matrix in wxGCDC.

- Add wxGraphicsContext::Flush() for Cairo renderer.

- Add wxStyledTextEvent::GetListCompletionMethod() (NewPagodi).

- Add wxEVT\_STC\_AUTOCOMP\_COMPLETED event (NewPagodi).

- Fix retrieving bounding box for wxDC with transformed coordinates.

- Fix wxGraphicsMatrixData::Concat() for Direct2D and Cairo renderers.

- Fix calculating point position in wxDataViewCtrl::HitTest().

- Fix position of the rectangle returned by wxDataViewCtrl::GetItemRect().

- Add wxDataViewRenderer::GetAccessibleDescription().

- Add wxDataViewCheckIconTextRenderer class.

- Implement persistence support for wxDataViewCtrl (iwbnwif).

- Improve wxImage::Scale() handling of pixels with alpha channel (Tim Kosse).

- Fix parsing of RGBA strings in wxColour (Laurent Poujoulat).

- Refactor code in wxQuantize() for MSVC to avoid crash.

- Fix drawing rotated and/or underlined text on wxPostScriptDC.

- Support multiline strings in wxPostScriptDC::DrawText(), DrawRotatedText().

- Deprecate wxEVT\_STC\_KEY and wxEVT\_STC\_URIDROPPED events (NewPagodi).

- Optimize font registration in PostScript code emitted by wxPostScriptDC.

- Fix drawing filled arc with wxPostScriptDC::DrawArc().

- Optimize PostScript code emitted by wxPostScriptDC to draw elliptic arcs.

- Add wxStyledTextCtrl::AutoCompGetCurrentText() (NewPagodi).

- Extend wxStyledTextCtrl::FindText() to return end position of matched

text (NewPagodi).

- Fix adding/removing items to/from wxRearrangeList.

- Handle wxST\_ELLIPSIZE\_XXX styles in wxStaticText XRC handler (tm).

- Add support for bitmaps to wxToggleButton XRC handler (tm).

- Fix wxGCDC::SetDeviceClippingRegion().

- Never restore size smaller than the best one in wxPersistentTLW.

- Fix escaping/unescaping characters in wxLongStringProperty in wxPG (mikek).

- Ensure that navigation order reflects layout of wxStdDialogButtonSizer.

- Add Scintilla FineTicker methods to wxSTC (NewPagodi).

- Add wxFontPickerCtrl::SetMinPointSize() (Andreas Falkenhahn).

- Add Set/GetFooter/Text/Icon() to wxRichMessageDialog (Tobias Taschner)

- Add wxFloatingPointValidator::SetFactor().

- Add "hint" property to wxSearchCtrl XRC handler.

- Add wxEVT\_SEARCH[\_CANCEL] synonyms for wxSearchCtrl events.

- Generate wxEVT\_SEARCH on Enter under all platforms.

- Extend wxRendererNative::DrawGauge() to work for vertical gauges too.

- Add wxHD\_BITMAP\_ON\_RIGHT style to wxHeaderCtrl.

- Send wxEVT\_DATAVIEW\_ITEM\_EDITING\_DONE when editing was cancelled too.

- Add wxIMAGE\_OPTION\_GIF\_TRANSPARENCY (Hugo Elias).

wxGTK:

- Make wxUIActionSimulator work with GTK+ 3 (Scott Talbert).

- Make wxBORDER\_NONE work for wxTextCtrl with GTK+ 3 (Adrien Tétar).

- Handle wxTE\_PROCESS\_TAB, and its absence, correctly in multiline wxTextCtrl.

- Apply wxTextCtrl::SetDefaultStyle() to user-entered text (Andreas Falkenhahn).

- Implement dynamic auto-completion in wxTextEntry (AliKet).

- Fix wxTextCtrl::GetStyle() with GTK+ 3.

- Fix wxButton::SetBitmapPosition() with GTK+ 3 (Jake Nelson).

- Support background colour in wxDataViewCtrl attributes.

- Fix regression with showing custom wxDataViewCtrl editors.

- Improve wxSpinCtrl best size calculation.

- Implement support for icon locations in wxMimeTypesManager (Hanmac).

- Improve wxRadioBox appearance in high DPI (Arrigo Marchiori, Maarten Bent).

- Cosmetic fix for empty wxCheckBoxes display (Chuddah).

- Fix crashes in wxFileSystemWatcher implementation (David Hart).

- Fix wxBitmap ctor from XBM for non-square bitmaps.

- Fix wxDC::GetClippingBox() for transformed wxDC.

- Add support for affine transformation matrix in wxDC (GTK+ 3).

- Fix wxMemoryDC::Blit() with itself as source (GTK+ 3).

- Fix displaying labels of wxRadioBox items.

- Add a native implementation for clearing bitmap/window wxGraphicsContexts

- Implement XYToPosition() for single-line wxTextCtrl.

- Implement ShowPosition() for single-line wxTextCtrl.

- Improve wx{Client,Paint,Screen,Window}DC::GetPPI() (GTK+ 3).

- Suppress focus loss events for wxChoice and wxComboBox on opening popup.

- Make custom URI schemes work WebKit2-based wxWebView (Scott Talbert).

wxMSW:

- Add support for building with Microsoft Visual Studio 2017 (Tobias Taschner).

- Allow loading icons from resources in wxIconBundle (PB).

- Enable wxStackWalker in MinGW64 builds.

- Fix build under Cygwin in 64 bits.

- Fix crash when using wxCHMHelpController() in 64 bit builds (Xlord2).

- Fix wxSpinCtrl appearance: show arrows inside the control (Catalin Raceanu).

- Fix MDI menu display after failure to create a child frame (troelsk).

- Fix wxScreenDC::GetSize() with multiple monitors (iwbnwif).

- Fix background colour returned by wxTextCtrl::GetStyle() (Andreas Falkenhahn).

- Revert to using equally-sized buttons in wxToolBar by default.

- Fix default button highlighting.

- Restore dispatching wxThreadEvent while resizing the window broken in 3.1.0.

- Fix wxGraphicsMatrix::TransformDistance for Direct2D renderer.

- Fix wxDC::Clear() for rotated DC.

- Fix wxDC::GetClippingBox() for transformed wxDC.

- Fix wxMemoryDC::Blit() with itself as source (Tim Roberts).

- Return proper value from wxIAccessible::get\_accSelection() if no children

are selected.

- Add wxAccStatus::wxACC\_INVALID\_ARG error code to indicate argument-related

errors in wxAccessible methods.

- Return DISP\_E\_MEMBERNOTFOUND error code from wxIAccessible if wxAccessible

methods return wxAccStatus::wxACC\_NOT\_SUPPORTED.

- Return null BSTR from wxIAccessible if string returned from wxAccesible

method is empty.

- Handle Ctrl-A in non-rich multiline text controls (Jens Göpfert).

- Use cairo\_win32\_surface\_create\_with\_format() to create ARGB surface from

wxMemoryDC (Cairo >= 1.15.4).

- Fix updating bounding box in wxDC::DrawSpline().

- Fix placing 0RGB wxBitmaps on the clipboard.

- Fix handling wxClipboard data when wxUSE\_OLE == 0.

- Fix caching of wxFONTSTYLE\_SLANT fonts in wxTheFontList.

- Fix wxTextCtrl::XYToPosition() and PositionToXY().

- Fix updating radio groups when non-radio item is inserted to wxMenu.

- Fix autoselecting the contents of wxTextCtrl with wxWANTS\_CHARS style.

- Implement SetIcon(), SetPosition(), GetPosition() for native wxProgressDialog.

- Fix focus-related problems when using native wxProgressDialog.

- Fix crash when reparenting the currently focused window to another TLW.

- Fix sending wxEVT\_TEXT\_ENTER when using auto-completion (Dubby).

- Fix missing selection event on click in multiselection wxDataViewCtrl (mikek).

wxOSX:

- Many fixes for tab navigation (ikamakj).

- Fix handling of non-BMP characters in GetPartialTextExtents() (ARATA Mizuki).

- Fix setting foreground colour for several controls (Steve Browne).

- Fix dialogs using wxFRAME\_FLOAT\_ON\_PARENT frame as parent (Lauri Nurmi).

- Implement wxGetDisplaySizeMM() and fix printing DPI (David Vanderson).

- Remove extra borders around wxFilePickerCtrl (John Roberts).

- Set up extensions filter correctly in wxFileDialog (nick863).

- Implement wxDataViewChoiceByIndexRenderer (wanup).

- Fix unnecessary indentation in list-like wxDataViewCtrl (Andreas Falkenhahn).

- Recognize macOS 10.12 Sierra in wxGetOsDescription() (Tobias Taschner).

- Don't try to open command line arguments as files (Jeff Hostetler).

- Implement wxDataViewCtrl::SetRowHeight().

- Add OSXEnableAutomaticQuoteSubstitution(), OSXEnableAutomaticDashSubstitution()

and OSXDisableAllSmartSubstitutions() to control wxTextCtrl smart behavior.

- Don't allow interacting with disabled wxSlider (Andreas Falkenhahn).

- Fix setting alignment in wxTextCtrl with wxTE\_DONTWRAP (Andreas Falkenhahn).

- Allow pasting using Cmd+V in wxTextCtrl with wxTE\_PASSWORD style.

- Update font code to use toll-free bridges from CTFontRef to NSFont or UIFont

- Add a native implementation for clearing bitmap/window wxGraphicsContexts

- wxiOS now needs a minimum of iOS 9 for deployment

- Fix handling CTM in wxGraphicsContext::SeTransform and GetTransform().

- Allow turning on/off opacity selector in wxColourDialog.

- Implement wxTextCtrl::PositionToXY() and XYToPosition().

- Implement wxTextCtrl::ShowPosition().

- Add support for wxTE\_NO\_VSCROLL style to wxTextCtrl.

- Add support for wxTE\_CHARWRAP style to wxTextCtrl.

- Fix selecting RGB bitmaps (with no alpha channel) into wxMemoryDC.

- Fix updating radio groups when menu item is inserted/removed from wxMenu.

- Allow changing alignment styles after wxTextCtrl creation (Andreas Falkenhahn).

- Fix wxDataViewColumn::SetSortOrder() (hartwigw).

wxQt

- Many changes and improvements by Sean D'Epagnier merged into trunk (with

help from R.J.V. Bertin).

Unix:

- Support new gstreamer API in 1.7.2+ in wxMediaCtrl (Sebastian Dröge).

- Add wxStandardPaths::SetFileLayout(FileLayout\_XDG) (Martin Koegler).

3.1.0: (released 2016-02-29)

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- Many improvements for high DPI monitors support, notably XRC now interprets

all pixel values as being in resolution-independent pixels.

- wxQt branch implementing Qt5-based port of wxWidgets API was merged into

the trunk (Mariano Reingart, Google Summer of Code project).

- Added wxNativeWindow allowing to embed native widgets in wxWidgets programs.

- Improve wxGLCanvas to be more type safe and better support modern OpenGL.

All:

- Add UTF-8 and ZIP 64 support to wxZip{Input,Output}Stream (Tobias Taschner).

- Upgrade libpng to 1.6.21 fixing several security bugs (Paul Kulchenko).

- Support gstreamer 0.10 and 1.0 in wxMediaCtrl (Sebastian Dröge).

- Fix handling of Unicode file names in wxFileSystem::FindFirst().

- Add wxStandardPaths::GetUserDir() (Tobias Taschner).

- Allow calling wxItemContainer::Add() and similar with std::vector<> argument.

- Add "%z" support to printf()-like functions like wxString::Format() (RIVDSL).

- Add DOCTYPE support to wxXmlDocument (Nick Matthews).

- Add wxPowerResourceBlocker (Tobias Taschner).

- Add wxApp::StoreCurrentException() and RethrowStoredException() and implement

their functionality by default when using C++11 compiler.

- Allow iterating over wxCmdLineParser arguments in order (Armel Asselin).

- Add wxScopedArray ctor taking the number of elements to allocate.

- Add wxDynamicLibrary::GetModuleFromAddress() (Luca Bacci).

- Implement wxThread::SetPriority() for pthreads (Luca Bacci).

- Add wxInt64 support to wxText{Input,Output}Stream (Alexander Bezzubikov).

- Define wxOVERRIDE as override for supporting compilers (Thomas Goyne).

- Allow specifying custom comparator for wxSortedArrayString (Catalin Raceanu).

- Add wxDateTime::GetWeekBasedYear().

- Specialize std::hash<> for wxString when using C++11.

- Allow recursive calls to wxYield().

- Add wxART\_FULL\_SCREEN standard bitmap (Igor Korot).

- Fix wxStringTokenizer copy ctor and assignment operator.

- Added wxASSERT\_MSG\_AT() and wxFAIL\_MSG\_AT() macros.

- Accept replacement character in wxString::ToAscii() (Stefano D. Mtangoo).

Unix:

- Fix bug in wxExecute() if child exited too quickly (Kevin B. McCarty).

- Add --disable-sys-libs configure option.

- Add --enable-cxx11 configure option.

All (GUI):

- Allow requesting modern (3.x+) OpenGL version in wxGLCanvas (Fabio Arnold).

- Add wxActivityIndicator.

- Add wxWindow::FromDIP() for simpler high DPI support.

- Allow initially hiding sizer items in XRC (Bogdan Iordanescu).

- Allow customizing window shown by wxBusyInfo.

- Add wxAddRemoveCtrl.

- Add wxAppProgressIndicator for MSW (Chaobin Zhang) and OS X (Tobias Taschner).

- Add support for using checkboxes to wxListCtrl (Maarten Bent).

- Add wxListBox::GetTopItem() and GetCountPerPage() (Andreas Falkenhahn).

- Add wxTextEntry::ForceUpper().

- Add wxTextEntryDialog::ForceUpper().

- Add wxEVT\_MAGNIFY mouse event (Joost Nieuwenhuijse).

- Add wxProcess::Activate().

- Fix setting colours of labels in wxSlider.

- Fix setting background colour of wxRadioBox buttons.

- Add wxTopLevelWindow::Enable{Maximize,Minimize}Button() (John Roberts).

- Make results of wxDC::DrawEllipticArc() consistent across all platforms.

- XRC handler for wxAuiToolBar added (Kinaou Hervé, David Hart).

- Improve wxLIST\_AUTOSIZE\_XXX support in generic wxListCtrl (Kinaou Hervé).

- Support "color", "size" and "font" CSS for fonts in wxHTML (Kinaou Hervé).

- Fix one pixel gaps between consecutive underlined words in wxHTML.

- Add wxCursor::GetHotSpot().

- Add wxFD\_NO\_FOLLOW style for wxFileDialog (Luca Bacci).

- Add support for embedding bitmaps in generated SVG in wxSVGFileDC (iwbnwif).

- Add support for sorting wxDataViewCtrl by multiple columns (Trigve).

- Allow dropping data on wxDataViewCtrl background (Laurent Poujoulat).

- Add wxRendererNative::DrawGauge() (Tobias Taschner).

- Add wxRendererNative::DrawItemText() (Tobias Taschner).

- Add wxHtmlWindow::SetDefaultHTMLCursor() (Jeff A. Marr).

- Add default ctor and Create() to wxContextHelpButton (Hanmac).

- Send events when toggling wxPropertyGrid nodes from keyboard (Armel Asselin).

- Fix wxRearrangeList::Check() which asserted and misbehaved before.

- Optimized wxRTC insertion and deletion when floating objects are present.

- Added on-demand image loading option to wxRTC.

- Add wxFont::GetBaseFont() (Melroy Tellis).

- Update Scintilla to v3.5.5 (Christian Walther, Heyoupeng, ARATA Mizuki).

- Add wxStyledTextCtrl copy/paste text events (Christian Walther).

- Improve RTL support in wxStyledTextCtrl (Zane U. Ji).

- Add support for loading old V1 BMP files to wxImage (Artur Wieczorek).

- Improve auto sizing of wrapped cells in wxGrid (iwbnwif).

- Fix handling of rectangular selections in wxStyledTextCtrl (roberto).

- Fix characters outside of the BMP in wxStyledTextCtrl (Thomas Goyne).

- Allow access to the currently shown wxInfoBar buttons (Hanmac).

- Add wxGenericListCtrl::EndEditLabel() (Tim Kosse).

- Use native renderer for drawing check boxes in wxPropertyGrid (Eran Ifrah).

- Fix drawing custom colours of wxEnumProperty items in wxPG (Artur Wieczorek).

- Add wxBitmap ctor from wxCursor.

- Always disable wxWizard "Back" button on the starting page (pmgrace30).

- Add wxUIActionSimulator::Select().

- Add wxOwnerDrawnComboBox::Is{List,Text}Empty() methods.

- Fix creating/removing mode buttons in wxPG manager (Artur Wieczorek).

- Harmonize wxMenuEvent handling between all major ports.

- Fix wxPGChoices copy ctor (Snoits).

- Show how to handle files on command line in docview sample (Neil Mayhew).

- Improve wxFileCtrl::SetFilename() and SetPath() (Kevin B. McCarty).

- Fix a crash when using animated GIFs in wxHtmlListBox.

- Use platform-specific stock icons for wxEditableListBox buttons.

- Add support for the events from multimedia keys (Jens Göpfert).

- Allow suppressing warnings from wxImage::LoadFile().

- Allow customizing wxRibbon highlight colours (wxBen).

- Enable selecting opacity in generic wxColourPicker.

wxGTK:

- Support building wxGTK3 under Windows (Kolya Kosenko).

- Implement support for non-wxTextCtrl custom editors in wxDataViewCtrl.

- Fix vertical cell alignment in wxDataViewCtrl.

- Fix clearing of wxComboBox with wxCB\_READONLY (Chuddah).

- Fix setting "pressed" bitmap for wxToggleButton (Kevin B. McCarty).

- Fix GTK+ warnings for wxFileDialog with wxFD\_MULTIPLE style.

- Don't generate wxEVT\_LIST\_ITEM\_RIGHT\_CLICK outside of item area (Igor Korot).

- Implement wxDataViewCtrl::SetIndent().

wxMSW:

- Make default wxSizer border DPI-aware.

- Implement native appearance for wxAUI tabs and toolbars (Tobias Taschner).

- Show more modern-looking wxNotificationMessages under 8+ (Tobias Taschner).

- Improve wxMimeTypesManager open command detection (Eric Jensen).

- Make wxFILTER\_INCLUDE\_LIST in wxTextValidator actually usable.

- Fix handling crashes in wxEVT\_PAINT event handlers.

- Fix wxStackWalker to work with Unicode identifiers (Suzumizaki-kimitaka).

- Fix appearance of toggled wxToggleButtons with bitmap (tm).

- Fix setting menu item bitmaps after appending them (Artur Wieczorek).

- Fix setting label of submenu items (Artur Wieczorek).

- Fix handling of selected images in wxBitmapButton (Artur Wieczorek).

- Fix loading of bitmap with non-pre-multiplied alpha (Artur Wieczorek).

- Support multiline strings in wxDC::DrawRotatedText() (Artur Wieczorek).

- Fix stretchable spacers in vertical toolbars (Artur Wieczorek).

- Implement setting foreground colour for wxRadioButton (Artur Wieczorek).

- Add font colour support to wxFontPickerCtrl (Pana Alexandru).

- Add wxEnhMetaFile::Detach() (Luca Bacci).

- Add support for saving 256\*256 32bpp ICOs in PNG format (Artur Wieczorek).

- Keep menu item icon after removing and adding it back (Artur Wieczorek).

- Add wxThread::MSWGetHandle() (troelsk).

- Allow using sizers for laying out wxMDIClientWindow (Artur Wieczorek).

- Fix updating wxSlider background when its parent background changes.

- Implement wxListBox::EnsureVisible() (RIVDSL).

- Drastically improve efficiency of selecting all items in wxDataViewCtrl.

- Fix spurious selection events generation in wxDataViewCtrl.

- Fix wxMenuEvent::GetMenu() for wxEVT\_MENU\_{OPEN,CLOSE} in MDI frames.

- Fix updating wxSpinCtrlDouble tooltip text (Laurent Poujoulat).

- Fix appearance of checked disabled wxToolBar tools with custom images.

- Fix reading of not NUL-terminated strings using wxRegKey (Steffen Olszewski).

- Fix unexpected change in MDI children order after showing a file dialog.

- Don't send events for already selected radio popup menu items (Kinaou Hervé).

- wxListCtrl::GetItemCount() in wxEVT\_LIST\_INSERT\_ITEM is no longer off by 1.

- Don't send bogus root selection events when clicking wxTreeCtrl (sbrowne).

- Avoid bogus assert after calling wxDatePickerCtrl::SetRange().

- Add solution file for building with MSVS 2014 (Peter Tissen).

- Correct wxGetOsDescription() for Windows 10 (Tobias Taschner).

- Make wxListCtrl &c appearance more native on modern systems (Tobias Taschner).

- Don't send wxActivateEvent for minimized windows (bzcdr).

- Return correct OS version under Windows 8.1 and later.

- Fix crash in wxD2DContext when using non-MSVC compiler (iwbnwif).

- Notify shell about the changes done by wxMimeTypesManager (Maarten Bent).

- Fix wxPrintf() and friends when using MinGW with ANSI stdio option.

- Fix strike-through support in wxFont with GDI+ (David Vanderson).

- Fix UTF-32 conversion for non-BMP characters (ARATA Mizuki).

- Use correct parent for the native modal dialogs (Andreas Falkenhahn).

- Fix layout of wxSlider with wxSL\_VALUE\_LABEL only (gafatoa).

- Fix flicker when resizing columns of report-mode wxListCtrl.

- Implement wxTreeCtrl::SetDoubleBuffered() (Steve Browne).

wxOSX/Cocoa:

- Make wxiOS (iPhone) port build and minimally work again (Tobias Taschner).

- Use more efficient FSEvents (10.7+) in wxFileSystemWatcher (Roberto Perpuly).

- Implement wxWindow::Disable() for non-native controls too (Steve Browne).

- Implement wxTopLevelWindow::EnableCloseButton() (John Roberts).

- Fix wxEVT\_CHAR for non-BMP Unicode characters (ARATA Mizuki).

- Add wxTE\_AUTO\_URL support to wxTextCtrl (Igor Korot).

- Add support for wxEVT\_COMBOBOX\_{DROPDOWN, CLOSEUP} events (Igor Korot).

- Implement strike-through support in wxFont (Igor Korot, Daniel Kulp).

- Provide native implementation of wxStandardPaths (Tobias Taschner).

- Add wxTE\_{RIGHT,CENTER} support for multiline wxTextCtrl (Andreas Falkenhahn).

- Don't leave wxSlider labels shown when the slider itself is hidden.

- Don't generate wxEVT\_TEXT\_ENTER for controls without wxTE\_PROCESS\_ENTER.

- Implement wxToolTip::SetDelay() (David Vanderson).

- Correct positioning of popup menus relative to mouse pointer (John Roberts).

- Add support for right-aligned checkboxes (John Roberts).