KOffice 1.4.1 Accessibility Assessment

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About KOffice

KOffice is a free, integrated office suite for KDE, the K Desktop Environment. It consists of the following applications.

Core applications:

- **KWord** - A frame-based word processor that can work in two modes: page oriented or layout oriented
- **KSpread** - A powerful spreadsheet application.
- **KPresenter** - A full-featured presentation program.
- **Kexi** - An integrated environment for creating databases and database applications.

Graphical applications:

- **Kivio** - A Visio®-style flowcharting application.
- **Karbon14** - A vector drawing application.
- **Krita** - A pixel-based image manipulation program like Adobe© Photoshop® or Corel® Painter™.

Other applications:

- **KChart** - An integrated graph and chart drawing tool.
- **KFormula** - A powerful formula editor.
- **Kugar** - A tool for generating business quality reports.

More information concerning KOffice can be obtained at http://koffice.kde.org/.

Accessibility Overview

Since KOffice applications are built using the KDE libraries and since developers are expected to follow the KDE Human Interface Guidelines, KOffice applications inherit all the accessibility features and capabilities of KDE. See http://accessibility.kde.org/reports/ for a Voluntary Product Accessibility Template (VPAT) for KDE, and see http://accessibility.kde.org/ for KDE accessibility features and capabilities.

This document enumerates the accessibility problems as they exist in the KOffice version 1.4.1 release. It is assumed that the desktop has KDE version 3.4.1 installed, including kdelibs, kdebase, and kdeaccessibility packages.

The approach is to evaluate each KOffice application from the standpoint of four handicapped persons having the following disabilities:

1. Mouseless operation. A motor impaired individual who is unable to effectively use a mouse, but able to operate a keyboard or keyboard replacement device. Each application is evaluated for usability without a mouse.
2. Low-sighted. An individual who is sight impaired or light alergic, but not blind. In the KDE Control Center, the HighContrastDark-big theme was set and each application was evaluated for usability in this desktop theme. The screen resolution was 1024x768.
3. Blind. A blind but hearing individual augmented with a braille or other suitable text reading device.
4. Deaf. An individual with no or very limited hearing, but normally sighted.

Each KOffice application was evaluated under each of these disabilities. Any problems found are enumerated and possible workarounds suggested. An identifier is assigned to each problem, for purposes of coordination with the development team. The **Fixed?** column indicates if the problem has been fixed or will be fixed in version 1.5 of KOffice, which is scheduled for release in early 2006 (see the KOffice 1.5 section for additional information).

Since the approach is to identify the accessibility problems, this is a negative document. This should be kept in mind while reading.

Mouseless Operation

General

Id	Problem	Workaround	Fixed?
mo.gen.toolbars	It is not possible to reach or manipulate the toolbars at the top, sides, or bottom of screens.	This is a general KDE problem. It is possible to hide the toolbars from the Settings menu. Most functions on the toolbars can be invoked from the main menu or using keyboard shortcuts. Use mouse emulation (Alt+F12) to move mouse pointer to a toolbar and press space to "click", OR use the Mouse Navigation feature.[1], OR assign shortcuts to toolbar functions using the Settings	Configure Shortcuts menu item.	
mo.gen.iconview	When KDE is configured with the default color scheme "Plastik", in screens containing certain selection panels (IconView), it is difficult to tell when focus is on the panel because the currently selected item's background is too dark and obscures the focus rectangle. Examples include: KWord Open Document dialog, KWord Insert Link dialog, Quick Access panel in File Open/Save dialogs.	This is a general KDE problem. In KDE Control Center	Appearance and Themes	Theme Manager, choose a different theme, OR in KDE Control Center	Appearance and Themes	Colors, choose a different color scheme, or in the Widget Color frame, choose Selected Background and lighten the color. This permits the focus rectangle to be distinquished from the selection background color.	
mo.gen.panel.resize	It is not possible to move dividers between panels in order to resize the panels. Examples: the divider between Document Structure panel and main panel in KWord, the dividers in	Use the Mouse Navigation[1] feature of KDE to simulate dragging the divider.	Yes

1 Mouse Navigation permits you to simulate mouse pointer movement, clicking, and dragging using the numeric keypad on the keyboard. The feature is enabled in the KDE Control Center under Peripherals | Mouse. For more information, see the Mouse section under Settings in the KDE Help Center.

Id	Problem	Workaround	Fixed?
	KPresenter main screen.		

KWord

Id	Problem	Workaround	Fixed?
mo.kword.tab	Once focus is in the main document panel, it is not possible to tab out of it. In turn, this means that many of the widgets on the screen cannot be reached without a mouse.	Press Alt+F to pull down File menu. Press Esc to close the menu and press Tab. Focus is now on the Document Structure panel. Use Shift+Tab to reach other widgets on the screen that can receive focus, OR use mouse emulation (Alt+F12) to move mouse pointer to another widget and press space to "click", OR use the Mouse Navigation[1] feature.	Yes
mo.kword.shortcuts	When focus is in the main screen, global KDE shortcuts do not work. For example, Zoom In (Ctrl++), Zoom Out (Ctrl--), Popup Context Menu (Menu).	Use View menu to change zoom level. To display the context menu, use Mouse Navigation[1] to simulate right-clicking.	Partly
mo.kword.docstruct. reach	In the main screen, it is not possible to reach the Document Structure panel.	See mo.kword.tab. Once focus is on the Document Structure panel, all elements of the structure can be reached with arrow keys.	Yes
mo.kword.docstruct. context	It is difficult to invoke functions in the Document Structure panel because they require right mouse click.	Use Mouse Navigation[1] to simulate right-clicking.	Yes
mo.kword.formula.c trli	There is a conflict between the KWord Italic shortcut and KFormula Insert Symbol shortcut. Both use Ctrl+I.	This appears to be a bug. An alternate shortcut can be assigned using the Settings	Configure Shortcuts menu item.	
mo.kword.formula.s ymbol	While there is a main menu item for inserting a formula symbol, there is no menu item or shortcut for selecting which symbol to insert.	Use standalone KFormula application to create the formula, OR use Mouse Navigation[1] to select a symbol in the formula toolbar. A more permanent fix is to use Mouse Navigation[1] to drag the formula toolbar to the top of the screen. The Symbol box can then be reached via Tabbing (see mo.kword.tab). Also, some of the symbols can be inserted by first typing a letter, selecting the letter and pressing Ctrl+G (Convert to Greek).	Yes
mo.kword.formula.d elim	There is no menu item or shortcut for inserting formula delimiters.	Use standalone KFormula application to create the formula, OR use Mouse Navigation[1] to insert a delimiter from the formula toolbar OR shortcuts can be assigned using the Settings	Configure Shortcuts menu item.	
mo.kword.formula.f unc	There are no menu items or shortcuts for inserting Roots, Fractions, Brackets, Abs(), Overline, Underline, Integral, Sum, or Product into a formula.	Use standalone KFormula application to create the formula, OR use Mouse Navigation[1] to insert from the formula toolbar, OR shortcuts can be assigned using the Settings	Configure Shortcuts menu item.	

Id	Problem	Workaround	Fixed?
mo.kword.textframe.create	Difficult to create a text frame. Requires sizing of frame using mouse.	Use Mouse Navigation[1] to simulate dragging frame border. A single click is all that is needed; the size can then be adjusted using Frameset Properties dialog.	Yes
mo.kword.frame.cursor	No mechanism to move cursor outside of a floating (text) frame. No mechanism to move cursor into an existing floating frame. Tab key doesn't work.	Use text Find function to find text outside/inside the frame, OR use Mouse Navigation[1].	Yes
mo.kword.frame.select	No menu item or shortcut to select a frame. Difficult to delete, move, or resize a frame or change frame properties.	Use Mouse Navigation[1] to select frame border or hold down Ctrl key and click inside frame. If cursor is outside a frame, hold down Shift key and use arrow keys to select the frame. You may then delete the frame or change some frame properties.	Yes
mo.kword.table.create	It is difficult to create a table because mouse must be clicked to position the table.	Use Mouse Navigation[1].	Yes
mo.kword.table.cursor	No mechanism to move cursor into or out of a table frame.	See mo.kword.frame.cursor.	Yes
mo.kword.table.row.resize	No mechanism to resize a table row.	Use Mouse Navigation[1].	
mo.kword.picture.create	It is difficult to insert a picture because it must be positioned with the mouse.	Use Mouse Navigation[1].	Yes
mo.kword.picture.select	No mechanism to select a picture. Difficult to delete, move, or resize.	Use Mouse Navigation[1].	Yes
mo.kword.splitview.select	No mechanism to switch between views in split view mode.	Use Mouse Navigation[1].	Partly[2]

KSpread

Id	Problem	Workaround	Fixed?
mo.kspread.tab	Once focus is in the main spreadsheet panel, it is not possible to tab out of it. In turn, this means that many of the widgets on the screen cannot be reached without a mouse.	Press Alt+F to pull down File menu. Press Esc to close the menu and press Tab. Focus is now on the Cell combobox. Use Shift+Tab to reach other widgets on the screen that can receive focus, OR use mouse emulation (Alt+F12) to move mouse pointer to another widget and press space to "click", OR use the Mouse Navigation[1] feature.	Yes
mo.kspread.rowcol.select	Not possible to select entire rows or columns, since the only way to do that is by clicking on row/column headers, which cannot receive focus.	Use Mouse Navigation[1].	

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2   The Alt-F8 shortcut can be used to position to any widget that can receive focus, but a better solution (such as Alt+number) is needed.

KPresenter

Id	Problem	Workaround	Fixed?
mo.kpr.tab	Once focus is in the slide panel, it is not possible to tab out of it. In turn, this means that many of the widgets on the screen cannot be reached without a mouse.	Press Alt+F to pull down File menu. Press Esc to close the menu and press Tab twice. Focus is now on the Outline/Preview panel. Use Shift+Tab to reach other widgets on the screen that can receive focus, OR use mouse emulation (Alt+F12) to move mouse pointer to another widget and press space to "click", OR use the Mouse Navigation[1] feature.	Partly[2]
mo.kpr.focus	It is difficult to tell which panel of the main screen has focus, especially when a panel is empty.		
mo.kpr.shortcuts	When focus is in the Outline/Preview panel, or the slide panel, global KDE shortcuts do not work. For example, Popup Context Menu (Menu). Zoom In (Ctrl++) and Zoom Out (Ctrl+-) are overridden by Increase /Decrease Depth.	Use View menu to change zoom level. To display the context menu, use Mouse Navigation[1] to simulate right-clicking.	
mo.kpr.outline.reach	In the main screen, it is not possible to reach the Outline/Preview or Note panels.	See mo.kpr.tab. Once focus is on the Outline/Preview panel, all elements of the structure can be reached with arrow keys. Use Shift+Tab to reach Note panel.	Partly[2]
mo.kpr.outline.conte xt	It is difficult to invoke functions in the Outline/Preview panel because they require right mouse click.	Use Mouse Navigation[1] to simulate right-clicking.	
mo.kpr.textframe.cre ate	Difficult to create a text frame. Requires sizing and positioning of frame using mouse.	Use Mouse Navigation[1] to simulate dragging frame border. A single click is all that is needed; the size can then be adjusted using the General tab of the Format | Properties dialog.	
mo.kpr.frame.cursor	No mechanism to move cursor from one frame to another in a slide. Tab key doesn't work. The Find workaround of KWord doesn't work either.	Use Mouse Navigation[1].	
mo.kpr.frame.select	No menu item or shortcut to select a frame. Difficult to delete, move, or resize a frame or change frame properties.	Put focus in the Outline panel (see mo.kpr.tab), use arrow keys to select frame, then press Tab. Arrow keys may now be used to position frame. Del key will delete the frame. Use the General tab of the Format | Properties dialog to change frame size. Note: These workarounds do not work with Table objects.	
mo.kpr.table.create	It is difficult to create a table because mouse must be clicked to position and size the table.	Use Mouse Navigation[1].	
mo.kpr.table.cursor	No mechanism to move cursor into or	Use Mouse Navigation[1].	

Id	*Problem*	*Workaround*	*Fixed?*
	out of a table frame.		
mo.kpr.table.move	No mechanism to move a table.	Use Mouse Navigation[1].	
mo.kpr.inaccessible	Preparer stopped evaluating KPresenter at this point. There were too many problems. KPresenter is not usable without a mouse.	Use Mouse Navigation[1].	

Kexi

Id	*Problem*	*Workaround*	*Fixed?*
mo.kexi.handbook	There is no Handbook for Kexi.		
mo.kexi.menu	When navigating the main menu using Right Arrow key, navigation stops at the Data menu. This appears to be a bug, since the menu stays on screen, but focus goes to the Table Edit panel.	Use Left Arrow.	
mo.kexi.table.datatype	It is not possible to select the data type of a field in the table editor. Alt+DownArrow does not work.	Use F4 OR use Mouse Navigation[1].	Yes
mo.kexi.table.pk	When editing the fields of a table, it is not obvious how to flag a field as a primary key.	Use Popup Context Menu (Menu key) and select Primary Key, OR use Edit | Primary Key on the main menu, OR use Property Editor.	
mo.kexi.pe.boolean	In the Property Editor, is not obvious how to change a boolean property. Alt+DownArrow does not work.	Press Space bar.	
mo.kexi.pe.value.picklist	It is not possible to change the value of a property in the property editor that has a picklist of possible values, for example, SubType. Alt+DownArrow does not work.	Use F4 OR use Mouse Navigation[1].	Yes
mo.kexi.query.create	When creating a query, it is not possible to add a table to the query.	Use Mouse Navigation[1] to select and add table in query toolbar.	
mo.kexi.query.columns	Not possible to select a column, table, or totals in Query Columns panel. Alt+DownArrow does not work.	Use F4 OR use Mouse Navigation[1].	Yes
mo.kexi.form.widget.create	It is not possible to add a widget to a form.	Use Mouse Navigation[1].	
mo.kexi.form.crash	Pressing Tab key while focus is in the Form Editor window, but not on any widgets on the form, crashes Kexi.	Bug.	
mo.kexi.form.widget.resize	It is not possible to change the size of a widget in the form editor without the mouse.	Use Property Editor, OR use Mouse Navigation[1].	
mo.kexi.form.taborder	It is not possible to change the tab order of widgets in the Edit Tab Order dialog. This is a bug. The Up/Down buttons should be replaced with PushButtons, not Toolbar buttons.	Use Mouse Navigation[1].	Yes

Kivio

Note: Because of the graphical drag and drop nature of Kivio, it is not suitable for use in creating files without a mouse. Kivio was evaluated as a viewer only.

Id	Problem	Workaround	Fixed?
mo.kivio.scrolling	Not possible to scroll main document window.	Use Zoom OR use Mouse Navigation[1].	
mo.kivio.pan	The pan tool only works with a mouse.	Use Mouse Navigation[1].	
mo.kivio.page	Not possible to change pages in a multi-page document.	Use Mouse Navigation[1].	

Karbon14

Note: Because of the graphical drag and drop nature of Karbon14, it is not suitable for use in creating files without a mouse. Karbon14 was evaluated as a viewer only.

Id	Problem	Workaround	Fixed?
mo.k14.scrolling	Not possible to scroll document window.	Use Zoom OR use Mouse Navigation[1].	

Krita

Note: Because of the graphical nature of Krita, it is not suitable for use in creating files without a mouse. Krita was evaluated as a viewer only.

Id	Problem	Workaround	Fixed?
mo.krita.scrolling	Not possible to scroll document window.	Use Zoom OR use Mouse Navigation[1].	

KChart

Id	Problem	Workaround	Fixed?
mo.kchart.charttype	Not possible to choose type of chart or invoke the chart wizard.	Use Mouse Navigation[1].	

KFormula (standalone application)

Id	Problem	Workaround	Fixed?
mo.kfo.focus	It is difficult to tell when focus is on the main formula panel, especially when a formula matrix is not present.		
mo.kfo.symbols	No menu item or shortcut for selecting the symbol to be inserted by Insert Symbol function.	Tab to the symbol button on the toolbar. Press Alt+DownArrow to drop down list.	

Kugar (viewer)

Id	Problem	Workaround	Fixed?
mo.kugar.scrolling	Not possible to scroll document window.	Use Mouse Navigation[1].	

Kugar (designer)

Id	Problem	Workaround	Fixed?
mo.kugar.handbook	When selecting Kugar Report Designer	Bug. Choose Office	Kugar Designer in	

Id	Problem	Workaround	Fixed?
	Handbook (F1), displays "There is no documentation available for /kudesigner/index.html."	the KDE Help Center.	
mo.kugar.pe.value	It is not possible to choose values in the Property Editor.	Use Mouse Navigation[1].	
mo.kugar.item.create	It is not possible to add items (labels, fields, or lines) to a report because they must be positioned and sized with the mouse.	Use Mouse Navigation[1].	

Low-sighted Operation

The KOffice applications were evaluated under the HighContrastDark-big theme at a screen resolution of 1024x768. It is possible to solve many of the dialog sizing problems by increasing screen resolution and using a larger monitor.

General

Id	Problem	Workaround	Fixed?
ls.gen.opendoc	The Open Document dialog is wider than the screen. The text of the Selected Template frame is cut off.	Hold down the Alt key and drag the dialog with the mouse.	Yes
ls.gen.divider	The dividers on screens are a thin dashed line, making them difficult to see.		
ls.gen.configtoolbars	The Configure Toolbars dialog is too high for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.gen.statusbar	The status bar on the main screen is partially cut off. Bug?		
ls.gen.settings	The Settings dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.gen.printpreview.size	The Print Preview dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.gen.printpreview.color	The background color of the document on the Print Preview dialog is white, not black, i.e., does not honor the HighContrast Theme.		
ls.gen.help	The KDE Help Center displays Handbook pages with a white background, i.e., does not honor the HighContrast Theme.		
ls.gen.help.cfgfont.size	The Configure Fonts dialog in the KDE Help Center is too high for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.gen.help.cfgfont.frames	The headers of frames on the Configure Fonts dialog are cut off. ("Sizes", "Fonts", "Encoding")		
ls.gen.docinfo	The Document Info screen is too large.	Hold down the Alt key and drag the dialog with the mouse.	

KWord

Id	Problem	Workaround	Fixed?
ls.kword.rulers	The rulers are not visible in the main screen. Tab stops on the rulers are too small.		
ls.kword.connectframe	The Connect Frame dialog is too large for the screen. The titles of several frames in this dialog are partially cut off.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kword.frame.borders	By default, frame borders are black, which makes them invisible in this KDE theme.	Change the frame style to a medium dark background color, such as Dark Gray. Don't use Black or Dark Blue.	
ls.kword.frame.borders.color	Unable to set border color. Changes made in Border Color or Border Syle Manager are ignored. Bug?	Change background color of frame instead. Change to a medium color such as Dark Gray or Light Blue. Do not use Black or Dark Blue.	
ls.kword.frame.style mgr	The Frame Style Manager dialog is too small, cutting off Preview and Color widgets.	Resize the dialog.	
ls.kword.frame.sizehandles	The frame sizing handles (small squares) are dark blue. On this theme's black background they are difficult to see and too small.	Change background color of frame to a medium color such as Dark Gray or Light Blue. Do not use Black or Dark Blue.	
ls.kword.font.dropdown	The font size in the drop down list of the font button is too small; does not honor the theme setting.		
ls.kword.table.create	The default template for tables uses black borders for the table. When creating a table, it is not possible to see it on the black background of this theme.	Choose a different template when creating tables.	
ls.kword.table.templates	Most the templates for tables are unsuitable for this theme as they use white backgrounds. White text on a white background is not visible. The most usable themes are Header 3 and Header 4 but these are only usable in the header row of table.	Change the background color or text color of the templates or create a new template.	
ls.kword.table.style mgr	The Adjust frame in the Table Style Manager dialog is cut off.		
ls.kword.par.settings	The Paragraph Settings dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kword.par.borders	The preview borders are not visible in the Borders tab of the Paragraph Settings dialog because they are black on a black background.		
ls.kword.footnote	The Configure Endnode/Footnote dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.toolbars.border.ic	The Border Color and Text		

Id	Problem	Workaround	Fixed?
ons	Background Color icons on the Border Toolbar are too small (in this theme).		

KSpread

Id	Problem	Workaround	Fixed?
ls.kspread.sheet.nav	The Sheet navigation buttons (lower left-hand corner of main screen) are too small.	Use Ctrl+PgDn or Ctrl+PgUp to change sheets, OR show the Navigation toolbar (Settings | Toolbars on the main menu) and use these buttons with Mouse Navigation.	
ls.kspread.font.drop down	The font size in the drop down list of the font button is too small; does not honor the theme setting.		
ls.kspread.func	The Function dialog is too high for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kspread.series	The Series dialog is too wide for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kspread.char	The Select Character dialog (special character dialog) is too wide for the screen. The characters in the matrix are too small.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kspread.cellformat .size	The Cell Format dialog is too high for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kspread.cellformat .preview	The Preview frame on the Cell Format dialog is cut off.		
ls.kspread.cellformat .border.pattern	The pattern lines in the Borders tab of the Cell Format dialog are black on a black background and therefore not visible.	Change the line color to Gray.	
ls.kspread.pagelayou t	The Page Layout dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kspread.text2cols	The Text to Columns dialog is too wide for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kspread.calc.size	The Calculator dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kspread.calc.color	The result box in the Calculator has a light green background; not honoring theme.		
ls.kspread.toolbars.b order	The Border Color, Text Color, and Background Color icons on the Color/Border toolbar are too small (in this theme).		

KPresenter

Id	Problem	Workaround	Fixed?
ls.kpr.slides.backgro und	The background color of the slides panel on the main screen is white, i.e.,	Change the slide background color from the Format	Slide Background option on	

Id	Problem	Workaround	Fixed?
	the theme setting is not honored.	the main menu. However, you will also need to adjust default colors for text backgrounds, borders, font colors, lines, etc.	
ls.kpr.fontselect.size	The Font Select dialog is too high for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kpr.fontselect.shadow	The heading on the Shadow frame ("Shadow") on the Shadow tab of the Font Select dialog is cut off.		
ls.kpr.cfgslideshow.slides	The bottom of the selected slides widget on the Slides tab of the Configure Slide Show dialog is cut off.		
ls.kpr.frame.sizehandles	The frame sizing handles (small squares) are too small.		
ls.kpr.slides.scrollbars	The horizontal and vertical scrollbars of the Slide panel are partially cut off.		
ls.kpr.slides.paging	The next/previous slide buttons in the Slides panel are partially cut off and too small.		
ls.kpr.format.toolbar.icons	The Fill Color and Outline Color icons on the Format toolbar are too small (in this theme).		
ls.kpr.helplines	Help Lines are not visible.		
ls.kpr.textframe.border	The border of text frames is a narrow dashed line, making it difficult to see.		

Kexi

Id	Problem	Workaround	Fixed?
ls.kexi.chooseprj	The Choose Project dialog is larger than the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kexi.storagemethod	The phrase "Do Not Ask Me Again" at the bottom of the Select Storage Method dialog is cut off.		
ls.kexi.pe.font	The text of the Property Editor is way too small making it difficult to read.		
ls.kexi.dataview.toolbar.labels	The "Row" and "of" labels on the Data View and Query View toolbars are too small.		
ls.kexi.textview.sql	The background color of the SQL Query Text box in the Text View has a dark blue background with black text when it does not have focus, making it almost invisible.		
ls.kexi.form.widgethandles	The sizing handles of widgets on the Form View are black on a black background, making them almost impossible to see.		

Id	Problem	Workaround	Fixed?
ls.kexi.mainmenu.help	The Help menu item on the main menu is obscured by the view buttons.		

Kivio

Id	Problem	Workaround	Fixed?
ls.kivio.toolbar.format.icons	The Text Color, Line Color, and Fill Color icons on the Format toolbar are too small (in this theme).		
ls.kivio.doc.background	The background color of the main document panel on the main screen is white, i.e., the theme setting is not honored.		
ls.kivio.toolbar.format.dropdown	The dropdown lists of the Line Width and Line Style buttons on the Format toolbar are black on a dark blue background, making them difficult to see.		
ls.kivio.toolbar.page	The buttons on the page navigation toolbar (lower lefthand corner of document panel) are too small.		
ls.kivio.sizehandles	The sizing handles and connection points of widgets on the diagram are too small.		

Karbon14

Id	Problem	Workaround	Fixed?
ls.k14.doc.background	The background color of the main document panel on the main screen is white, i.e., the theme setting is not honored.		
ls.k14.rulers	The rulers are not visible.		
ls.k14.overview.font	The text of the Overview panel is too small, making it difficult to read.		
ls.k14.toolbar.tools.icons	The icons on the Tools toolbar are too small.		
ls.k14.toolbar.tools.fill	The buttons on the Fill frame of the Tools toolbar are way too small.		
ls.k14.sizehandles	The sizing handles of objects in the document are too small.		
ls.k14.toolbar.view.icon	The Context Help icon on the View toolbar is too small.		
ls.k14.colormgr	The text of the Color Manager panel is too small.		
ls.k14.pagelayout	The Page Layout dialog is too large for the screen.		
ls.k14.polygon	The Round Corners widget on the Polygonize dialog is cut off.		

Krita

Id	Problem	Workaround	Fixed?
ls.krita.newimage	The New Image dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	
ls.krita.palettes.default	The default palettes (General, Color Manager, and Tools) do not fit on the screen. The General palette is cut off.		
ls.krita.toolbar.painttools	The Painting Tools toolbar is cut of at the bottom of the screen.	Right-click on the top of the toolbar and change the icon size.	
ls.krita.rulers	The rulers are barely visible.		
ls.krita.palette.colormgr.gray	The Gray color widget in the Color Manager palette is too small.		
ls.krita.selection	The selected part of the image is not visible in the main document panel.		
ls.krita.histogram.lockup	The program locks up when choosing Layers	Histogram on the main menu.		Yes
ls.krita.imagerestore	The Image Restoration dialog is too large for the screen.	Hold down the Alt key and drag the dialog with the mouse.	Yes

KChart

Id	Problem	Workaround	Fixed?
ls.kchart.editdata.borders	The borders of the cells in the Edit Data screen are not visible.		
ls.kchart.editdata.text	The text of the cells in the Edit Data dialog are cut off; don't fit inside the cells.		
ls.kchart.selectcharttype	The selected chart type is not visible on the Select Chart Type dialog.		Yes

KFormula (standalone application)

Id	Problem	Workaround	Fixed?
ls.kfo.toolbar.add	The buttons on the Add toolbar are cut off at the right side of the screen.		
ls.kfo.doc.colors	The text of the main formula panel is blue on a black background, making it difficult to see.		
ls.kfo.doc.font.size	The default size of text in matrix cells is too small.	Increase the Default base size in Settings	Configure KFormula.	

Kugar (viewer)

Id	Problem	Workaround	Fixed?
ls.kugar.doc.background	The background color of the main document panel is white, i.e., the theme is not honored.		

Kugar (designer)

Id	Problem	Workaround	Fixed?
ls.kugar.opendoc	The Open Document dialog is wider than the screen. The text of the Selected Template frame is cut off.	Hold down the Alt key and drag the dialog with the mouse.	
ls.kugar.pe.font.size	The text of the rows in the Property Editor are cut off.		
ls.kugar.sizehandles	The sizehandles on the main document panel are too small.		

Blind

KDE does not have a general screen reader for blind users. Using the experimental AT-SPI bridge (http://trolls.troll.no/~harald/accessibility/index.html), it is possible to use the GNOME Gnopernicus screen reader, but this is difficult to install and configure and requires building from source code for many distributions. Because a screen reader is not available, KDE in general, and KOffice applications in particular, are not usable by the blind. This will addressed in a future version of KDE.

Deaf

There are no adverse findings for deaf users. There are no instances in KOffice applications where sound is used to alert users or is required in order to use the software. If any of the KOffice applications beep, the On Screen Bell feature, available in the KDE Control Center can be used.

Summary and Conclusions

The following table summarizes the accessibility findings for KOffice 1.4.1. These are the preparer's subjective conclusions.

Disability / Evaluation Method	Application	Accessibility
Motor Impaired / Mouseless Operation	KWord	Usable for simple word processing. Not usable for advanced word processing (frames, tables, pictures, formulas, etc.) unless used in conjunction with Mouse Navigation[1].
	KSpread	Usable.
	KPresenter	Not usable.
	Kexi	Usable in conjunction with Mouse Navigation[1].
	Kivio	Not usable. In conjunction with Mouse Navigation[1], usable as a viewer only.
	Karbon14	Not usable. In conjunction with Mouse Navigation[1], usable as a viewer only.
	Krita	Not usable. In conjunction with Mouse Navigation[1], usable as a viewer only.
	KChart	Usable in conjunction with Mouse Navigation[1].
	KFormula	Mostly usable.
	Kugar	Usable in conjunction with Mouse Navigation[1].
Low-sighted /	KWord	Mostly usable if appropriate defaults are first configured.

Disability / Evaluation Method	Application	Accessibility
HighContrastDark-Big Theme	KSpread	Usable.
	KPresenter	Usable.
	Kexi	Usable.
	Kivio	Mostly usable.
	Karbon14	Usable for simple graphics.
	Krita	Usable for simple graphics.
	KChart	Usable.
	KFormula	Usable.
	Kugar	Usable.
Blind	All	Not usable.
Deaf	All	100% usable.

Recommendations to Users and System Deployers

1. Be sure to install the kdeaccessibility package.

2. Evaluate different themes and setting for low-sighted users. For example, when using the HighContrastDark-big theme, changing the color of the Window Background from black to gray will help with visibility problems associated with frame borders in KWord and KPresenter. If none of your users are light alergic, consider using the HighContrastLight theme instead.

3. Acquire larger monitors for low-sighted users and increase their screen resolution.

4. Train users in Mouse Navigation feature.

5. Evaluate alternate pointing devices for mobility impaired users, such as trackballs, and eye/head-pointing devices.

6. Train and encourage users to explore keyboard shortcut capabilities, both in the KDE Control Center and in each application. For example, "Did you know that there are shortcuts available in the Settings | Configure Shortcuts dialog that are not associated with any on-screen menu items or widgets?"

7. Prepare a "Shortcut Cheat Sheet" that tells users about "hidden" shortcuts. For example:

    ● Alt-DownArrow will drop down the picklist of most comboboxes. F4 in Kexi drops down picklists.
    ● Alt-F3 can be used to move and resize any window, including undocked palette widgets.

8. Create KWord templates with more visible default frame background and border colors and deploy them to low-sighted users.

9. Report KDE accessibility issues and suggestions to the developers. KDE is a Free and Open Source (FOSS) project that encourages participation by all users, even when not software developers. You can make a difference. http://www.kde.org/support/

KOffice 1.5

At the time this assessment was prepared, KOffice developers had already fixed or were planning to fix many of the

problems enumerated in this document. The following accessibility enhancements will be part of the KOffice version 1.5 release scheduled for early 2006.

1. In all applications, except for Kexi, users may size widgets derived from QSplitter or QDockWidget by pressing F8 or Shift+F8. A resize icon appears on the border between the widget panels. User may press the arrows keys to simulate dragging of the border. Pressing F8 again rotates through all the QSplitter or QDockWidget panels on the screen. Shift-F8 rotates in backwards order. Pressing the keypad Enter key docks or undocks a QDockWidget panel. Esc exits resizing mode.

2. In all applications, except Kexi, users may place focus on any widget that accepts focus by pressing Alt-F8. Each widget that can receive focus gets a small single-letter or digit label similar in appearance to a tooltip. When user presses one of these letters or digits, focus is placed on the corresponding widget.

3. In KWord, Go To Document Structure (Alt+1) and Go To Document (Alt+2) shortcuts were added to permit easy switching between the Document Structure Area and the document.

4. In KWord, a Select Frame action (with shortcut) was added to the Edit menu to permit users to select the border of current frame without using the mouse.

5. When creating new frames in KWord, user may press Enter to insert the frame at the text caret position, rather than positioning the new frame with the mouse. The Frame Properties dialog may be used to resize or reposition the frame.

6. All KOffice applications, except Kexi, have a feature to speak widgets using text-to-speech. With this feature enabled, when user positions the mouse cursor over a widget, the widget's label is spoken. Options include speaking the widget's tooltip text, What's This text, and accelerator. This feature is intended as an aid to low-sighted users; not blind users. Unfortunately, this feature does not work with all widgets, but with most. This feature will be replaced with a more robust capability when KOffice is migrated to KDE 4.

7. In KWord, the text of the document may be spoken using text-to-speech in the Document Structure Area panel. This feature is intended as an aid to low-sighted users; not blind users. This feature will be replaced with a more robust capability when KOffice is migrated to KDE 4.

8. The startup wizard in all KOffice applications, except Kexi, has been replaced with a new wizard that fits on the screen better when themes with larger fonts are used.

9. Tabs in dockable panels can now receive focus, which means users can change tabs using the keyboard.

10. In KWord, the global Popup Context Menu shortcut (Menu key) now works in the main document panel and in the Document Structure Area.

11. In KWord, the Document Structure Area was improved so that users can place the text caret inside any text frame of the document.

12. In Kexi, Alt+DownArrow drops down pick lists in property dialogs.

13. Since the new shortcuts use the standard kdelibs KShortcut object, shortcuts may be customized by the user in the Configure Shortcuts dialog.

Recommendations to Developers

The following are specific recommendations for additional changes to the KOffice and kdelibs software to address some of the accessibility problems enumerated in this document:

1. Change applications so that panels can be directly reached using Alt and a number key. Alt+1 goes to the first panel, Alt+2 the second, etc. Kexi and KWord already have such an implementation and this should be added to the other KOffice applications as well.

2. Font Selector widget. Preparer is guessing that this widget does its own dropdown rendering in order to support displaying the name of each of the fonts in that font. It should be enhanced to render in the font size of the theme.

3. Fix bugs in certain dialogs causing frames to be cut off in the Big font themes. Incorrect SizePolicy?

4. Change IconView so that focus rectangle is separated from the selection background by a few pixels.

5. Fix widgets/applications that are somehow preventing Popup Context Menu global shortcut from working.

6. KWord needs a set of frame/table templates that are designed for high contrast themes. These should automatically be the default when using such themes, but user-overridable.

7. Either change QToolbarButton so that it can receive focus, or each application should provide more default shortcuts. The multi-key shortcut feature can be used effectively for this by combining functions that are on the same toolbar into a popup menu. Another solution is for widgets on toolbars to become focusable when a function key (F10 suggested) is pressed. (Note: Does it really make sense for some of the buttons on toolbars to be focusable while most are not?)

8. Menu items and shortcuts should be provided for navigating forward/backwards through pages of multi-page documents in Kivio. Since KSpread already supports Ctrl+PgDn and Ctrl+PgUp, suggest the same for Kivio.

9. Menu items and shortcuts should be provided for selecting chart types in KChart.

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