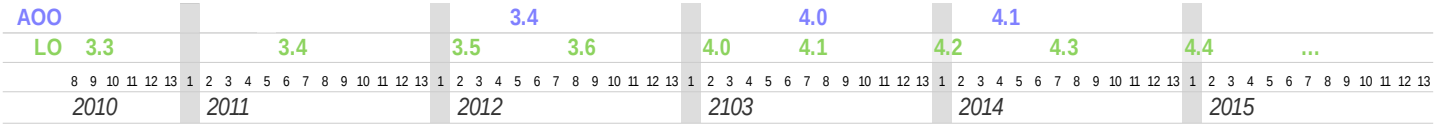
Comparing LibreOffice and Apache OpenOffice

LibreOffice and Apache OpenOffice both are derived from the former OpenOffice.org project. Over the years, the differences have grown and these documents offer a list of all the changes. This document is the starting point for the information comparing the two office suites.

Time line showing the various releases

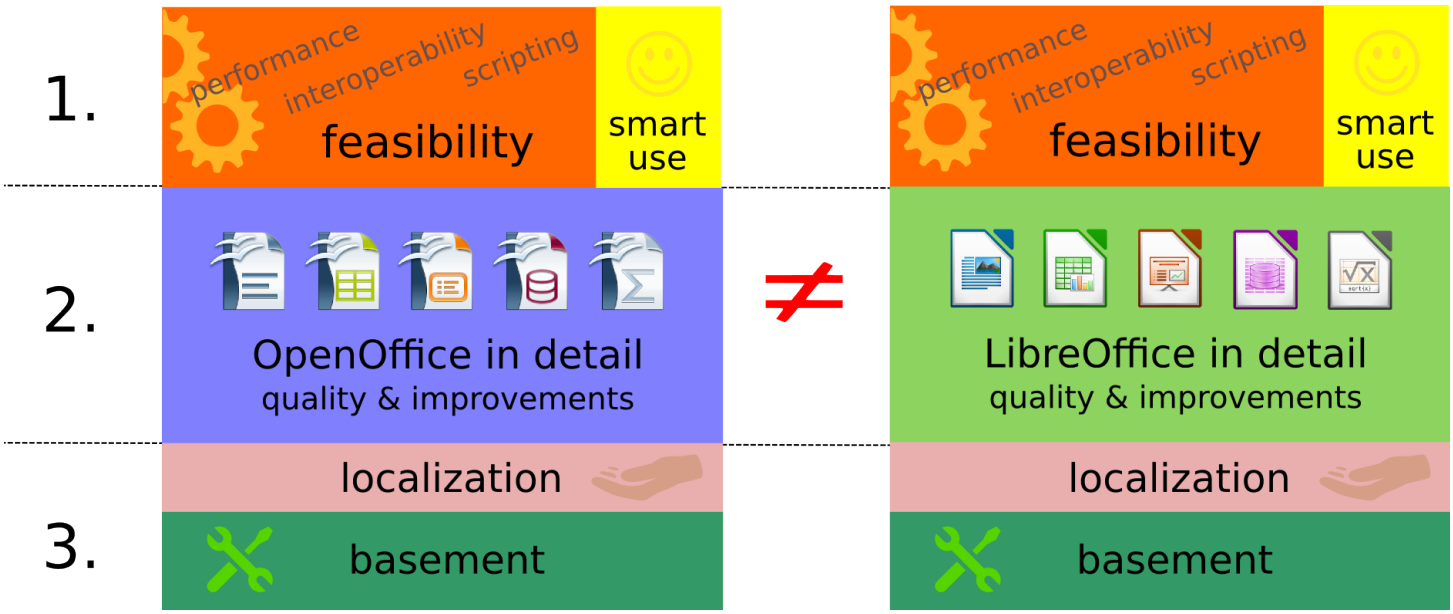


Each ApacheOpenOffice release gets one update
Each LibreOffice release typically gets 6 or 7 updates

links to release information
wiki.documentfoundation.org/ReleaseNotes/3.4
wiki.documentfoundation.org/ReleaseNotes/3.5
cwiki.apache.org/confluence/display/OOOUSERS/AOO+3.4+Release+Notes
wiki.documentfoundation.org/ReleaseNotes/3.6
wiki.documentfoundation.org/ReleaseNotes/4.0
cwiki.apache.org/confluence/display/OOOUSERS/AOO+4.0+Release+Notes
wiki.documentfoundation.org/ReleaseNotes/4.1
wiki.documentfoundation.org/ReleaseNotes/4.2
cwiki.apache.org/confluence/display/OOOUSERS/AOO+4.1+Release+Notes
wiki.documentfoundation.org/ReleaseNotes/4.3
wiki.documentfoundation.org/ReleaseNotes/4.4

Simply the office suites are composed of 3 'layers'

1. Feasibility & Smart use: performance, interoperability, look and feel interface.
2. In detail: improvements from word processing up to mathematical formulas.
3. Localization & Basement: language support, infrastructure, code.



Comparison overview

There is a huge number of changes and developments. They are presented in separate documents that you can open by clicking the following shapes.

Overview of contents

1.1 feasibility / performance	Core, clean & fixes – infrastructure – Calc performance – general performance – accessibility
1.2 feasibility / interoperability	Word – Excel – Visio – Powerpoint – general – handi features – ooxml & rtf-filters – improvements
1.3 feasibility / scripting	Basic IDE & scripting
2 smart use	GUI / start center – direct view – sidebar – dialogs – fresh look & features – displaying – cleanup – etc.
3 Writer	direct entry – lay-out / style – word & character counting – labels – embedding – track changes
4 Calc	pivottables – sheets & tabs – autofilter – conditional formatting – csv – formula / statistics – charts – etc.
5 Impress / Draw	masterpages – controlling – direct view & entry – handi features – graphics – miscellaneous
6 Base	PostgreSQL integration – query dialogs – Access2Base
7 Math	format dialogs – formulas – symbols
8 localization	new languages – spell & grammar – dates & numbers – language tools – miscellaneous
9 basement	API changes – removal / deprecation – infrastructure – code quality

Summary

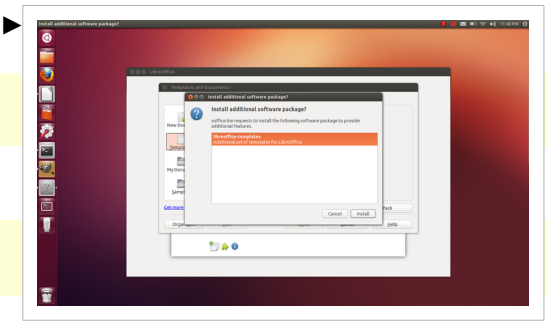
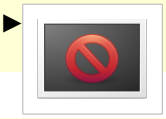
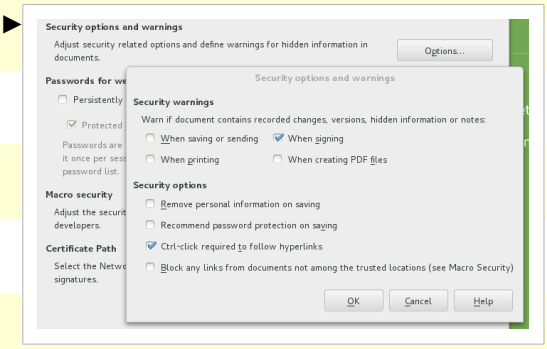
90% of the improvements are realized in LibreOffice, this software renews or develops quicker and surpasses Apache OpenOffice. LibreOffice stands for quality software both in enterprise and private use, with corresponding (professional) user support.

Some highlights

- Modern user interface with many many usability improvements over all modules, faster handling, 100+ localizations, improved accessibility.
- Interoperability: numerous improved import and extra file formats such as Visio and Corel, Smart-Art, export to OOXML.
- Writer: easier handling of header/footers, improved interoperability with page lay out, stable labels, printing of notes and much more.
- Calc: huge speed up especially on larger files, better Excel compatibility in features and functions, Chart and DataPilot improvements.
- Base: continues improvements, with also a native PostgrsQL driver.
- Math: continues improvements, with symbols and formatting.
- Impress/draw: including of color palettes, video, and easier and more stable use of master pages.
- Connectivity boost with CMIS integration, Google Drive, Sharepoint, Alfresco and more.
- Development: (relatively) fast and easy building, even on Windows. Neat integration with various IDE's. Modern and fast source and patch handling with git and gerrit.

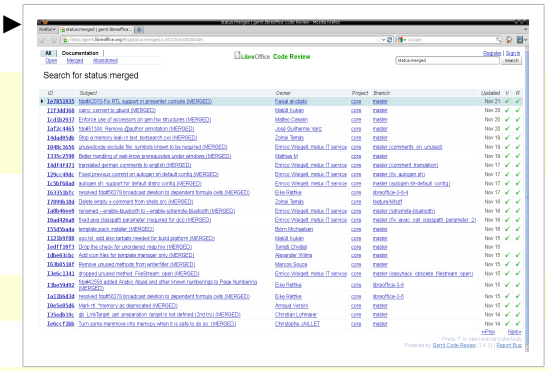
1.1 Feasibility – performance

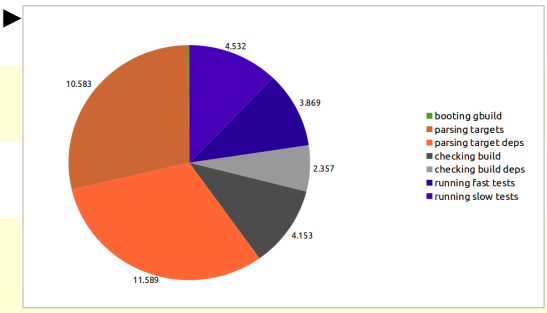
feasibility

1.1 PERFORMANCE (SINCE VERSION 3.4) core, clean & fixes	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Integration of session installer to add missing parts of LibreOffice on the fly. [-.- | 4.0]	-	+	▶ 
Linux fontconfig leak fixed, saving on use RAM. [-.- | 3.4]	-	+	
Removed localized palette files and have them localized run-time. [-.- | 3.4]	-	+	
Remove compatibility support layer old Windows 9x. [-.- | 3.4]	-	+	
Removed inefficient, and un-necessary 'BmpColor-Mode' approach to accessibility theming. [-.- | 3.4]	-	+	
Removed 150 duplicated redundant 'missing icon' icons to reduce bloat. [-.- | 3.4]	-	+	▶ 
Legacy binary file format filters cleanup. [-.- | 3.5]	-	+	
A "stealth mode" to not automatically access a document's external references. [-.- | 4.2]	-	+	▶ 
Reduce Java: Port Fax and Letter Wizard to Python. [-.- | 4.0]	-	+	
Reduce Java: Port Agenda Wizard from Java to Python. [-.- | 4.1]	-	+	
Reduce Java: Port Web Wizard from Java to Python. [-.- | 4.1]	-	+	
Text layout on Mac OS X has been ported from the deprecated ATSUI framework to Core Text. [-.- | 4.1]	-	+	
Under Windows, use keys under HKLM/Policies/Li-breOffice to make it possible to manage LibreOffice configuration with Group Policy Objects in Windows domains. [-.- | 4.2]	-	++	
Algorithm of reordering sorted data has been over-hauled. Sorting of large data set goes faster. [-.- | 4.3]	-	+	
Removed unnecessary text-attributes-changed events when typing. [-.- | 4.3]	-	+	
Redundant image swap out/in has been significantly cleaned up avoiding wasteful image load/save. [-.- | 4.4]	-	+	

feasibility

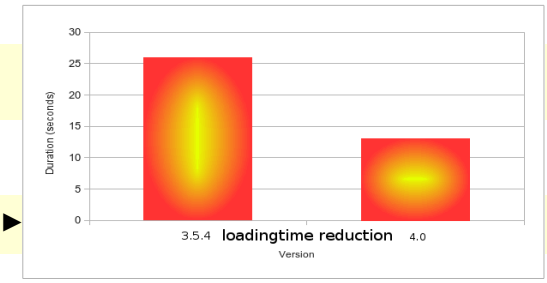
1.1 PERFORMANCE (SINCE VERSION 3.4) infrastructure	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
https://gerrit.libreoffice.org/ used for code review and easy patch submission. [-.- | 4.0]	-	+	▶
All legacy container classes (Sv*Array*, Table, Container, List etc.) replaced with STL containers. [-.- | 4.0]	-	+	
Translations module became a source-only module, l10n tools read translations directly from .po files. [-.- | 4.0]	-	+	
Tinderbox building bibisect repo. [-.- | 4.0]	-	+	
Tinderbox integration. [-.- | 4.0]	-	+	
Initial bibisect proof-of-concept. [-.- | 4.0]	-	+	
Port to gnumake, significant build parallelism and build-time improvements. [-.- | 4.1]	-	++	▶
Now using autoconf to produce separate config_host/config_feature. [-.- | 4.1]	-	+	
New, much cleaner and more readable service constructors. [-.- | 4.1]	-	+	
L10ntools refactoring, remove obsolete behaviours, deduplicate functions and increase the efficiency of merge of translations. [-.- | 4.1]	-	+	

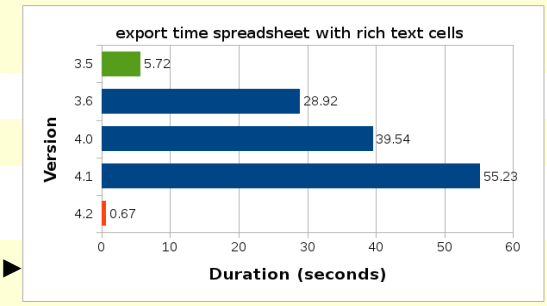


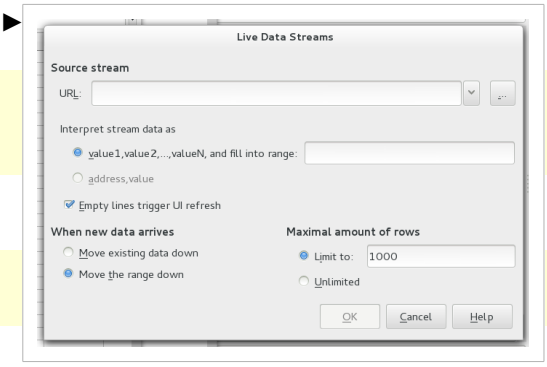


feasibility

1.1 PERFORMANCE (SINCE VERSION 3.4) Calc performance	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Massive re-work of external reference handling fixing defects in formula calculations involving external references, and to boost data caching. [-.- | 3.4]	-	+	
Now support 10000 sheets and improved performance operations. [-.- | 3.5]	-	++	
improvement on import of Excel documents containing a large number of form controls. [-.- | 3.5]	-	+	
Improved ods load times. [-.- | 4.0]	-	+	▶
improvement on the import of cell formats from Excel documents. [-.- | 3.5]	-	+	
Improved ods import with documents with large number of named ranges. [-.- | 3.5]	-	+	
Improved performance pivot tables in Calc. [-.- | 3.6]	-	+	
Improved import raw cell value from .xlsx. [-.- | 3.6]	-	+	
Improvement merged cell and matrix range import from .ods files. [-.- | 3.6]	-	+	
Significant speed up on export of ods document that contains a large number of rich-text cells. [-.- | 4.2]	-	+	▶
Improved xlsx load time. [-.- | 4.0]	-	+	
Calc's cell storage structure has been completely re-written. Improved locality of reference as well as the cost of storage. [-.- | 4.2]	-	+	
Added an experimental feature of live data streaming, it is disabled by default. [-.- | 4.2]	-	+	▶
Sharing string instances stored in cells to speed up sensitive and insensitive string comparisons, and to allow string equality check in OpenCL-based. [-.- | 4.2]	-	+	
Vertically adjacent formula cells share their formula token array instance. [-.- | 4.2]	-	+	
xlsx import filter has been re-worked on the import performance on xlsx documents. [-.- | 4.2]	-	+	
Experimental import for xlsx documents. Calc import xlsx documents using multiple threads for multiple sheets import concurrently. [-.- | 4.2]	-	+	
Cell note storage uses multi_type_vector. [-.- | 4.2]	-	+	
Improved VLOOKUP function with use of external references. [-.- | 4.2]	-	+	
Improved SUM, COUNT, SUMIFS function. [-.- | 4.2]	-	+	
New formula interpreter for parallel calculations of formula cells using GPU via OpenCL. [-.- | 4.2]	-	+	

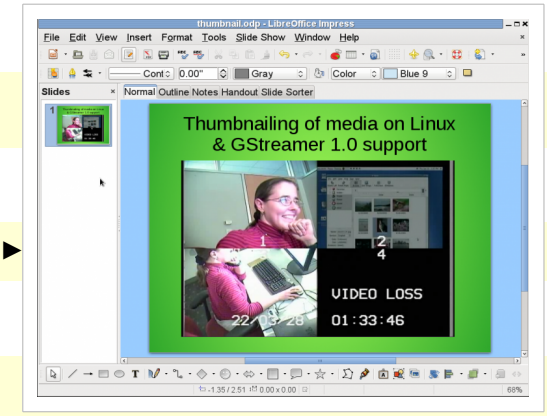


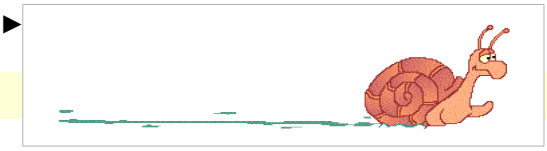


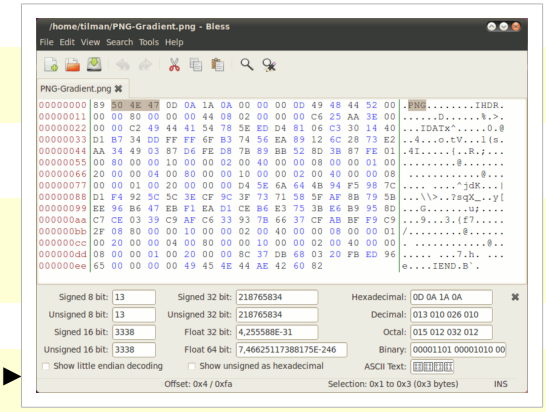


feasibility

1.1 PERFORMANCE (SINCE VERSION 3.4) general performance	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Shrink Windows installer download by using better compression schemes. [-.- | 3.4]	-	+	
Startup on Linux: with splash screen before starting to read all the application's data. [-.- | 3.4]	-	+	
Seldom used text encoding conversions in a separate library, saving RAM. [-.- | 3.4]	-	+	
Accelerated multimedia previews on Linux. [-.- | 4.0]	-	+	▶
Graphite smart font rendering support is rewritten. [-.- | 3.4]	-	+	
Flat ODF import/export filters from Java to C++ giving a huge speed increase. [-.- | 3.4]	-	+	
Large document scrolling/re-layout/interactive editing improvements. [-.- | 3.6]	-	+	
Improved saving a new entry to a large autocorrect replacement table. And handling speed up. [-.- | 4.0]	-	+	
Load and save time improvements slides / drawings with large numbers of shapes. [-.- | 4.0]	-	+	▶
Significantly improved RTF file load times. [-.- | 4.0]	-	+	
Increased size limit on (uncompressed) ODF documents from 2Gb to 4Gb. [-.- | 4.0]	-	+	
Use a hash for auto-correction until it needs to be sorted. [-.- | 4.1]	-	+	
Don't parse fourteen thousand lines of label descriptions on every startup, defer them until a sheet of labels is used. [-.- | 4.1]	-	+	
Refactored large parts of Writer code, split the large classes into smaller interfaces. [-.- | 4.4]	-	+	
FastSerializer classes used by all OpenXML export. [-.- | 4.4]	-	+	
Loading large autocorrect are parsed in a thread by the fastparser. Repeated parsing of unchanged files is avoided. [-.- | 4.4]	-	+	
Thumbnails are now compressed to PNG-8. [-.- | 4.4]	-	+	
JPEG-Turbo library for loading and de-compressing. [-.- | 4.4]	-	+	▶
Mail merge Writer processing faster with a large number of records. [-.- | 4.4]	-	+	

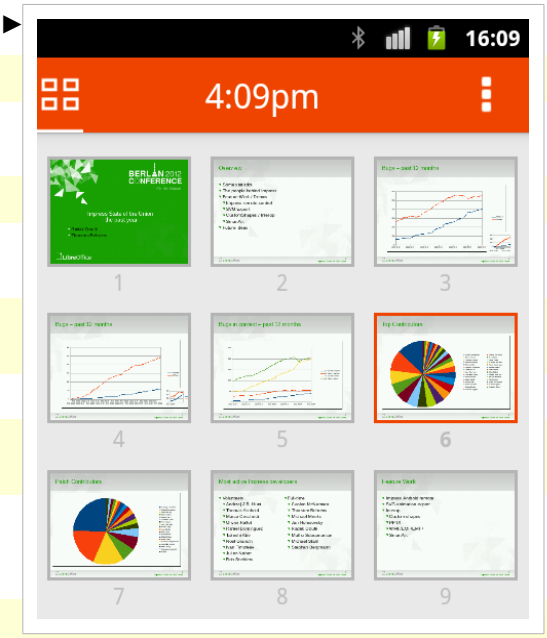






feasibility

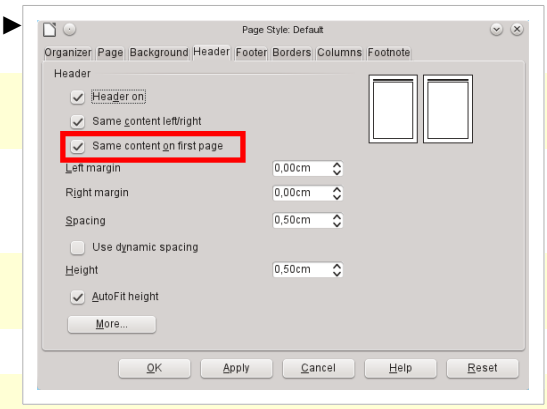
1.1 PERFORMANCE (SINCE VERSION 3.4) accessibility & miscellaneous	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Impress remote control for Android phones. [-.- | 4.0]	-	++	▶
Impress remote control for iOS. [-.- | 4.2]	-	++	
Embedded HSQLDB databases are size-minimized before saving with "CHECKPOINT DEFRAG". [-.- | 3.6]	-	+	
Presenter Console RTL support. [-.- | 4.0]	-	+	
A single MSI file for installing, with everything embedded. [-.- | 3.5]	-	+	
Different Encryption Algorithm (AES). Files with the old encryption of course can be used. [3.4 | 3.5]	+	+	
Support for Japanese postcard paper size. [-.- | 3.6]	-	+	
Port from Java to IAccessible2 for high fidelity Windows accessibility. [4.1 | 4.3]	+	+	
Autodetecting fax4CUPS machines and prompt for the fax number. Multiple numbers can be entered. [-.- | 4.3]	-	+	
Expose role change between heading and paragraph through a new UNO accessibility event. [-.- | 4.3]	-	+	
Notify misspelled words to accessibility. [-.- | 4.3]	-	+	
Use quick help text as the accessible name for toolbar buttons if not explicitly set. [-.- | 4.3]	-	+	
Much accelerated docx hyperlink import. [-.- | 4.3]	-	+	

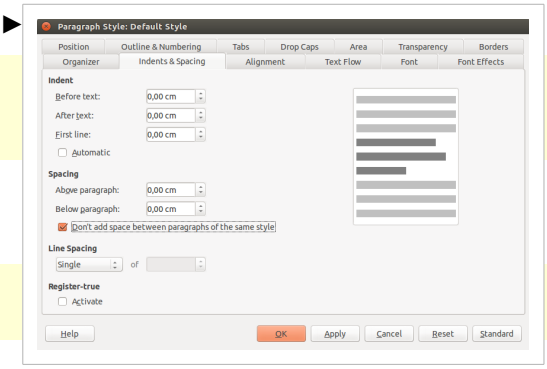


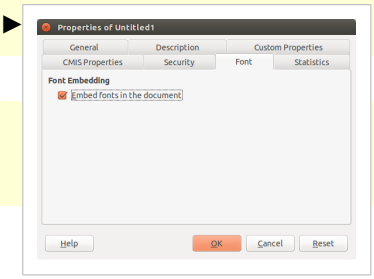
1.2 Feasibility – interoperability

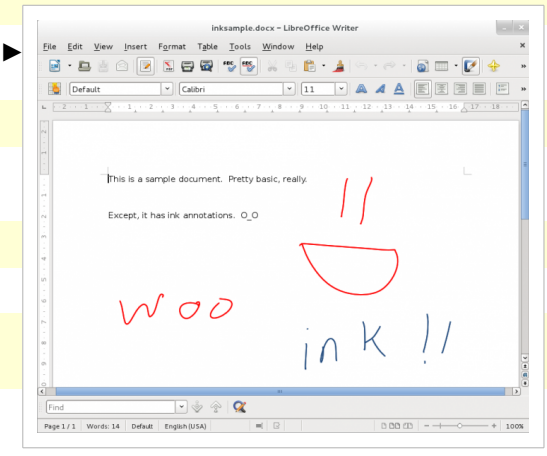
feasibility

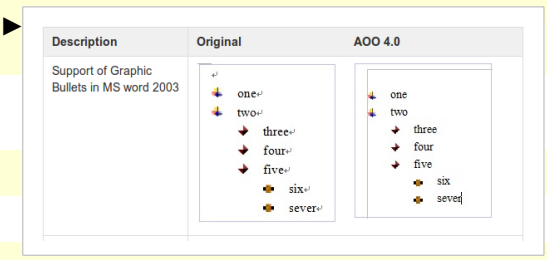
1.2 INTEROPERABILITY (SINCE VERSION 3.4) Writer & Word	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Allow different header and footer on the first page without using a separate page style. [-.- | 4.0]	-	++	▶
Importing doc, docx, and rtf files, the numberings are not split on new lines if they do not fit. [-.- | 3.5]	-	+	
Layout fixes tab stop at the end of margins. When importing doc, docx and rtf files, the numberings aren't split on new lines if they don't fit. [-.- | 3.5]	-	+	
Support for comments export/import in OOXML (docx) documents. [-.- | 3.5]	-	+	
Writer rtf import rewrite. [-.- | 3.5]	-	+	
VML import handles lines, rotations, flips. [-.- | 3.6]	-	+	
Support for contextual spacing. [-.- | 3.6]	-	+	▶
Numerous significant improvements to interoperability with Microsoft Word's docx format. OOXML filter improvements. [-.- | 4.2]	-	+	
Windows: updated build environment (Windows Server 2012R2 + Visual Studio 2012). rtf/docx import/export handles document zoom settings. [-.- | 3.6]	-	+	
Docx import now handles GetExpression and SetExpression fields. [-.- | 3.6]	-	+	
Support for importing Office SmartArt. [-.- | 3.6]	-	+	
Embedding fonts in a Writer document. [-.- | 4.1]	-	++	▶
Improved simple .doc/.docx import. [-.- | 3.6]	-	+	
Docx improvements: import of floating tables, OLE objects inside rectangles, margins of inline images using the WordProcessing markup. [-.- | 4.0]	-	+	
The docx import filter now handles non-bitmap drawingml shapes. [-.- | 4.1]	-	+	
Fix for page border margins in docx. [-.- | 4.2]	-	+	
Import ink annotations in docx and rtf documents. [-.- | 4.0]	-	+	▶
Fix different Odd & Even page flag ignored. [-.- | 4.2]	-	+	
Fix for hidden footer being imported to Writer as normal footer. [-.- | 4.2]	-	+	
Writer now preserves underline color. [-.- | 4.2]	-	+	
Writer now preserves character shading. [-.- | 4.2]	-	+	
Preserving page numbers that don't start at '1'. [-.- | 4.2]	-	+	
Borders in headers\footer not being lost anymore. [-.- | 4.2]	-	+	









Writer can now create dot files. [-.- | 4.2]	-	+	
Writer preserves the 'Track Changes ON' when present in a docx (track changes data itself is partially preserved). [-.- | 4.2]	-	+	
Import/export of graphical bullets of numberings in the doc, docx and rtf filters. [4.0 | 4.1]	+	+	▶ 
Solid page background color roundtripped in docx. [-.- | 4.2]	-	+	
Fix export of text-box inset property to docx. [-.- | 4.2]	-	+	
Fix for docx export of page border. [-.- | 4.2]	-	+	
Fix for preservation of bullets with level 0. [-.- | 4.2]	-	+	
Fix for page border shadows in docx. [-.- | 4.2]	-	+	
Text-Box background gradient color now preserved correctly. [-.- | 4.2]	-	+	
Preserve rotation information on bitmaps. [-.- | 4.2]	-	+	
Fix position and size values on exported shapes. [-.- | 4.2]	-	+	
Preserve Smart-Art information. [-.- | 4.2]	-	+	
Fix alignment/directionality when open docx file. [-.- | 4.2]	-	+	
Fix wrong directionality after save file created by MS. [-.- | 4.2]	-	+	
OOXML floating table improvements. [-.- | 4.2]	-	+	
Ampersand in document title by docx. [-.- | 4.2]	-	+	
Preserve style attribute on shapes and tables. [-.- | 4.3]	-	+	
Save embedded spreadsheets, presentations, etc. in docx documents. [-.- | 4.3]	-	+	
docx import handles explicit horizontal merges of table cells. [-.- | 4.3]	-	+	
docx import floating tables anchored inside tables. [-.- | 4.3]	-	+	
Brand new drawingML-based docx import/export filter for shapes and TextFrames. [-.- | 4.3]	-	+	

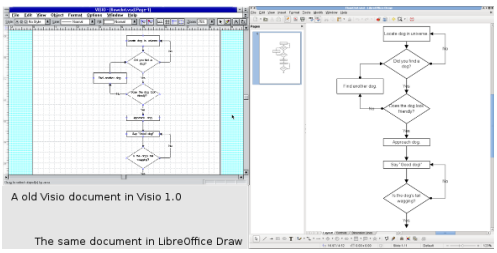
Description	Original	AOO 4.0
Support of Graphic Bullets in MS word 2003	one two three four five six sever	one two three four five six seves

feasibility

1.2 INTEROPERABILITY (SINCE VERSION 3.4) Calc & Excel	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Preserve OLE links to other Excel documents when importing an Excel document. [-.- | 3.4]	-	++	
DBF Import/Export dialog preferences are saved. [-.- | 3.5]	-	+	
Import/export color scales and data bars with xlsx.. [-.- | 4.0]	-	+	
Direct view on values of formula in ods and xlsx files as saved in the files (cached), without recalculating the formula directly when opening the file. [-.- | 4.0]	-	++	
Import/export functions new in Excel 2013 for ODF OpenFormula compatibility. [-.- | 4.1]	-	+	
COVARIANCE.P and COVARIANCE.S spreadsheet functions for MS-Excel interoperability. [-.- | 4.2]	-	+	
STDEV.P , STDEV.S spreadsheet functions. [-.- | 4.2]	-	+	
VAR.P and VAR.S spreadsheet functions. [-.- | 4.2]	-	+	
BETA.DIST , BETA.INV spreadsheet functions. [-.- | 4.2]	-	+	
BINOM.DIST and BINOM.INV functions. [-.- | 4.2]	-	+	
CONFIDENCE.NORM and CONFIDENCE.T spreadsheet functions. [-.- | 4.2]	-	+	
F.DIST, F.DIST.RT, F.INV, F.INV.RT and F.TEST spreadsheet functions. [-.- | 4.2]	-	+	
EXPON.DIST, HYPGEOM.DIST, POISSON.DIST and WEIBULL.DIST spreadsheet functions. [-.- | 4.2]	-	+	
Import charts from xlsx which don't have proper references but have internal data. [-.- | 4.2]	-	+	
GAMMA.DIST, GAMMA.INV, GAMMALN.PRECISE. [-.- | 4.3]	-	+	
LOGNORM.DIST, LOGNORM.INV, NORM.DIST, NORM.INV, NORM.S.DIST and NORM.S.INV. [-.- | 4.3]	-	+	
T.DIST, T.DIST.2T, T.DIST.RT, T.INV, T.INV.2T and T.TEST spreadsheet functions. [-.- | 4.3]	-	+	
PERCENTILE.EXC, PERCENTILE.INC, PERCENTRANK.EXC, PERCENTRANK.INC, QUARTILE.EXC, QUARTILE.INC, RANK.EQ and RANK.AVG. [-.- | 4.3]	-	+	
MODE.SNGL, MODE.MULT, NEGBINOM.DIST and Z.TEST spreadsheet functions. [-.- | 4.3]	-	+	
FLOOR.PRECISE, CEILING.PRECISE and ISO.CEILING. [-.- | 4.3]	-	+	
NETWORKDAYS.INTL and WORKDAY.INTL spreadsheet functions. [-.- | 4.3]	-	+	
ERF.PRECISE and ERFC.PRECISE spreadsheet functions. [-.- | 4.3]	-	+	
AGGREGATE spreadsheet function. [-.- | 4.4]	-	+	

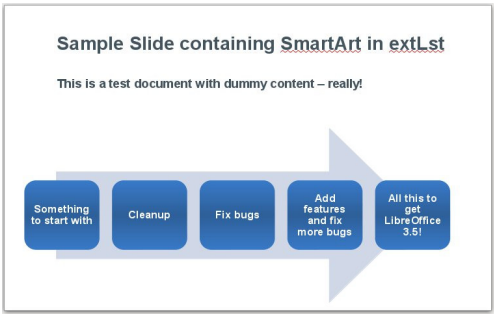
feasibility

1.2 INTEROPERABILITY (SINCE VERSION 3.4) import from Visio	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Extended coverage of Visio file-format. Supporting of all existing Visio file formats from 1.0 released in 1992 to Visio 2013. [-.- | 4.0]	-	++	▶
Import filter for MS Visio documents. [-.- | 3.5]	-	+	
Metadata is imported from vsdx. [-.- | 4.4]	-	+	
Metadata is imported from vsd. [-.- | 4.4]	-	+	



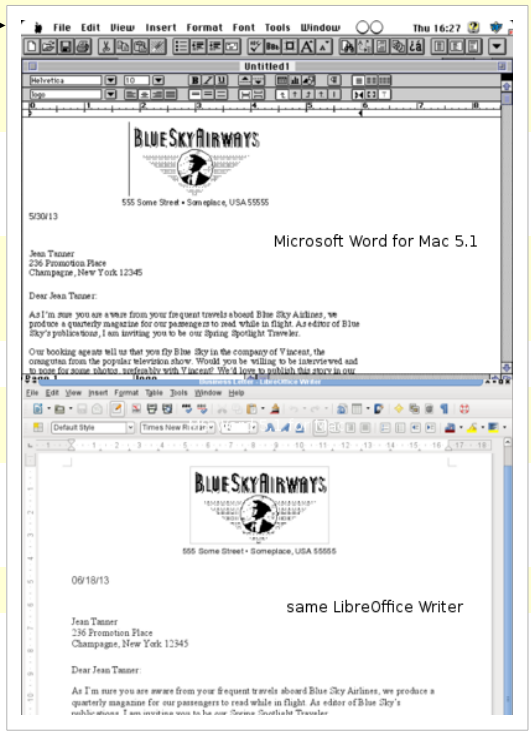
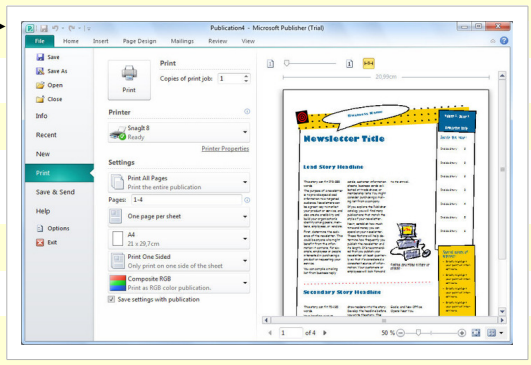
feasibility

1.2 INTEROPERABILITY (SINCE VERSION 3.4) Impress & Powerpoint	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Better support for importing Smart Art, reducing broken imports from pptx with smart arts. [-.- | 3.5]	-	++	▶
Improved Custom Shapes and their Presets pptx import, new presets implementation are added. [-.- | 3.5]	-	+	
Better handling of export to pdf for hidden slides. Per default, hidden slides are excluded, but they can be included per check-box. [-.- | 3.5]	-	+	



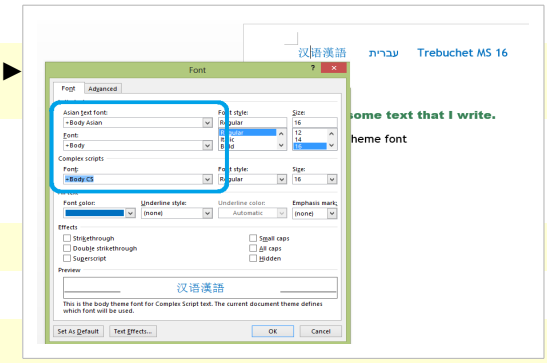
feasibility

1.2 INTEROPERABILITY (SINCE VERSION 3.4) general interoperability	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
It is possible to connect to OneDrive directly from LibreOffice. [-.- | 4.4]	-	++	▶
It is possible to connect to SharePoint 2009/2013 directly from LibreOffice. [-.- | 4.4]	-	++	
Separate borders width and style for Writer, Calc and Impress. [-.- | 3.4]	-	+	
New 3D border types to increase compatibility with loads of file formats, including ODF. [-.- | 3.4]	-	+	
Re-work legacy StarOffice (pre 2000) binary file format filters, this also removes clutter from the 'Save As' dialog. [-.- | 3.4]	-	+	
Support embedding Palettes and other property list types. Added the ability to (selectively) embed these inside the ODF container. [-.- | 3.5]	-	++	▶
Support for export and import of Math formulas in Office Open XML (docx) documents. [-.- | 3.5]	-	+	
Metric compatible fonts, key to improved interoperability. (*See: 3-03 Writer lay-out for all LibreOffice details since 3.5.*) [3.4 | 3.5]	+	++	
Line chart's smoothing has been upgraded to the ODF 1.2 standard. [4.0 | 3.5]	+	+	
Support Color and line styles for the columns and footnote separator lines. Better compatibility of LibreOffice with ODF. [-.- | 3.4]	-	+	▶
Import filter for Corel Draw documents. [-.- | 3.6]	-	+	
Improved OLE2 document import: .doc, .xls and .ppt. [-.- | 3.6]	-	+	
ODF Export comes with a "ODF 1.2 Extended (compact mode)" giving better interoperability with older consumers Open document Format. [-.- | 3.6]	-	+	
CMIS protocol support for easy access to document stored on document Management Systems like Alfresco, Nuxeo, SharePoint... [-.- | 4.0]	-	++	
On all non-Windows platforms a new mork driver implementation is used to access Thunderbird address book. [-.- | 4.0]	-	+	
Import filter for Microsoft Publisher publications. [-.- | 4.0]	-	+	▶
Improved ODF compatibility in various points. [-.- | 4.0]	-	+	
Initial work on a gnumeric import filter based on orcus. [-.- | 4.0]	-	+	
Direct access media file types (wma), (wmv), (aac), (flv), (ogx), rmi midi Audio and (SouND). [-.- | 4.1]	-	++	
Numerous improvements to the Microsoft OOXML Import and Export filters as well as for the Microsoft Office binary file formats and RTFformat. [-.- | 4.1]	-	+	

Import HTML files with over 64k table cells. [-.- | 4.1]	-	+	
Libmwaw brings support for a multitude of pre-OSX Mac word-processing documents in different file-formats: Microsoft Word for Mac 5.1, Write Now 4.0, MacWrite Pro 1.5, AppleWorks 6.0. [-.- | 4.1]	-	+	▶ 
Support document Management Systems: connection to GDrive is now possible, a CMIS Properties dialog allow to edit them. [-.- | 4.2]	-	+	
Import filters e-book formats, FictionBook 2, Palmdoc, PeanutPress (eReader), Plucker, Tealdoc, zTXT [-.- | 4.2]	-	+	
AbiWord import filter. [-.- | 4.2]	-	+	
Support for MS Office 2009 and 2013 Agile decryption mechanism. [-.- | 4.2]	-	+	
Import of more legacy Mac document types. Acta Mac Classic, Beagle Works / WordPerfect Works, Great Works, Macdoc, More Mac v2-3. [-.- | 4.2]	-	+	
Apple Keynote import filter. [-.- | 4.2]	-	+	
A host of legacy Mac formats. BeagleWorks, ClarisWorks, Claris Resolve, GreatWorks, MacWorks, Wingz spreadsheets. And GreatWorks, MacPaint, MacWorks, SuperPaint. [-.- | 4.3]	-	+	
Draw can import Adobe PageMaker files. [-.- | 4.3]	-	++	
Easy access media file: Real Audio (.ra), Real Media (.rm), Digital Video (.dv), Audio Codec (.ac3), Ogg Opus (.opus), Advanced Systems (.asf), MPEG (.m4a). [-.- | 4.4]	-	+	
Ability to import files from MacDraw, MacDraw II and RagTime for Mac (v. 2-3) in Draw and Writer. [-.- | 4.4]	-	+	
MS Publisher: Embedded fonts are now imported. [-.- | 4.4]	-	+	
MS Publisher: Tables are now imported. [-.- | 4.4]	-	+	▶ 
MS Publisher: Metadata is now imported. [-.- | 4.4]	-	+	
Abiword: Text language is now correctly set. [-.- | 4.4]	-	+	
Abiword: Globally defined writing mode is used. [-.- | 4.4]	-	+	
Abiword: Headings are now recognized. [-.- | 4.4]	-	+	
Abiword: Metadata is now imported. [-.- | 4.4]	-	+	
MS Works Spreadsheet: An old Lotus LICS character encoding is now recognized and converted. [-.- | 4.4]	-	+	
FictionBook: Text language is now set. [-.- | 4.4]	-	+	
FictionBook: Headings are now imported. [-.- | 4.4]	-	+	
Writer can now import Sony BroadBand eBook (lrf) files, via libe-book. [-.- | 4.4]	-	+	

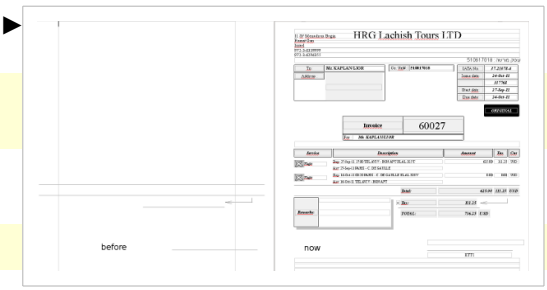
feasibility

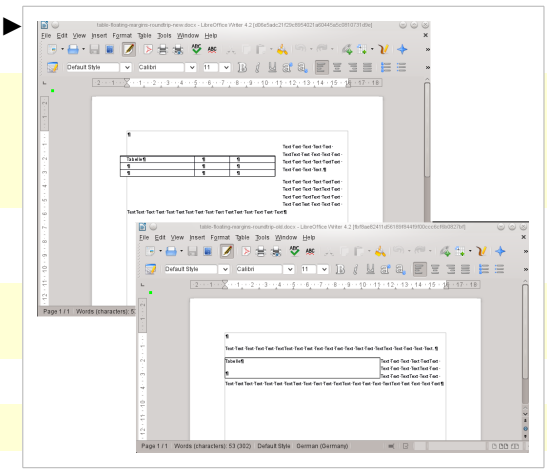
1.2 INTEROPERABILITY (SINCE VERSION 3.4) handi	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
SVG export now also includes hyperlinks. [-.- | 4.1]	-	+	
Theme fonts support: detect and render the proper fonts and preserve font theme attributes. [-.- | 4.3]	-	+	▶
It is possible to export CSS2 dot leaders by enabling Print layout. Via save the HTML Document file type in the Save As dialog of Writer. [-.- | 4.4]	-	+	



feasibility

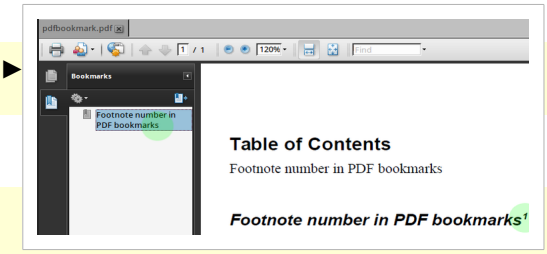
1.2 INTEROPERABILITY (SINCE VERSION 3.4) OOXML and RTF-filters	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
RTF filter now imports old Drawing Objects syntax. [-.- | 4.0]	-	+	▶
Use copy-on-write for RTF import stack - significantly accelerates large RTF document import. [-.- | 4.1]	-	+	
RTF import: added initial support for group shapes. [-.- | 4.2]	-	++	
Support for OOXML encryption. [-.- | 4.2]	-	+	
Numerous improvements to Import/Export filters and the MS Office binary file formats. [4.1 | 4.1]	+	+	
Lots of OOXML Filters, docx, xlsx, pptx, vml. [4.1 | 4.1]	+	+	
Other improvements on the Microsoft OOXML Import and Export filters, etc.. [4.1 | 4.2]	+	+	▶
Significant speedups of all OOXML parsing - by splitting parsing / tokenisation into a separate thread, and many other optimisations to FastParser. [-.- | 4.2]	-	+	
Initial import support for OOXML Strict in the docx, xlsx and pptx formats. [-.- | 4.3]	-	+	
Importing OOXML documents with lots of relations is much faster. [-.- | 4.3]	-	+	
Metadata is now imported from pptx. [-.- | 4.4]	-	+	
Custom wrap polygon is exported to docx. [-.- | 4.4]	-	+	
Support for bitmaps when exporting cropped images to docx. [-.- | 4.4]	-	+	

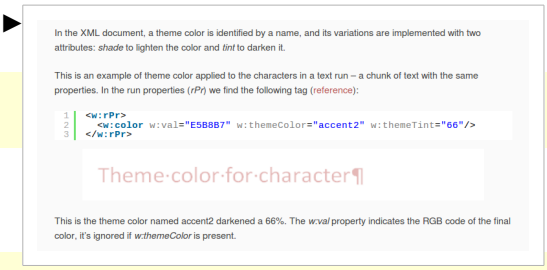


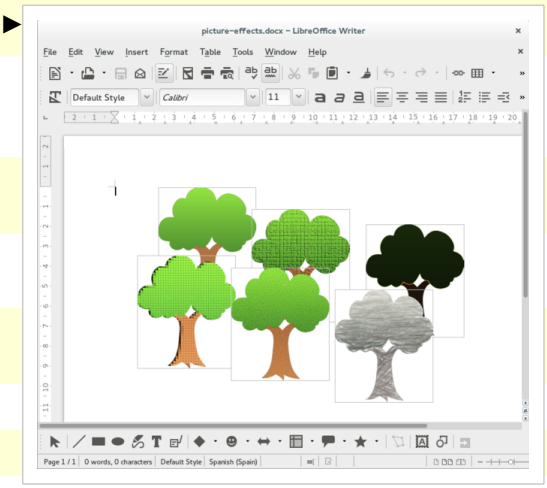


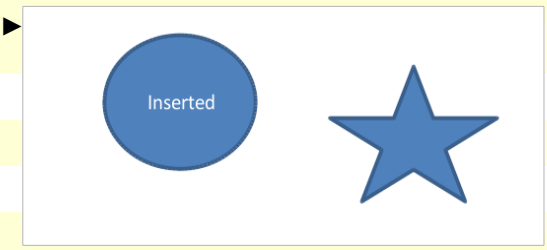
feasibility

1.2 INTEROPERABILITY (SINCE VERSION 3.4) improvements	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Tab stop and end margin behavior fixed. [-.- | 3.5]	-	+	
DF bookmarks don't contain footnote numbers. [-.- | 4.2]	-	+	▶
SVG export: fix double stroke-width problem. [-.- | 4.2]	-	+	
SVG export: support stroke-linecap and stroke-linejoin. [-.- | 4.2]	-	+	
Preserve line and fill theme colors on shapes, including color transformations. [-.- | 4.1]	-	+	▶
Preserve theme colors on fonts, paragraphs and table cells. [-.- | 4.3]	-	+	
Standard Document Tags support: fix export of date and checkbox controls, fix import of combobox controls. [-.- | 4.3]	-	+	
Preserve effects on shapes and pictures, including 3D effects and artistic effects. [-.- | 4.3]	-	+	▶
Gradient shape fill, the render is not accurate but the gradient information is completely preserved. [-.- | 4.3]	-	+	
Shape adjustment names are exported according to the specification. [-.- | 4.3]	-	+	
VML import handles optional command parameters. [-.- | 4.3]	-	+	
Improved drawingML export of pattern fill shapes. [-.- | 4.3]	-	+	
Import Line Join and Cap. [-.- | 4.3]	-	+	
Improve display and editing of rotated text. [-.- | 4.3]	-	+	
Correctly detect whitespace. [-.- | 4.3]	-	+	
Improved handling of Writer track changes in group-shape text. [-.- | 4.3]	-	+	▶
Correctly detect colors. [-.- | 4.3]	-	+	
Correctly position rotated text. [-.- | 4.3]	-	+	
Fix problem with lines getting stacked. [-.- | 4.3]	-	+	
Add dashes support. [-.- | 4.3]	-	+	





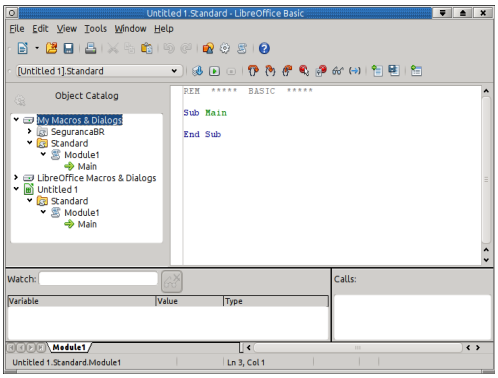




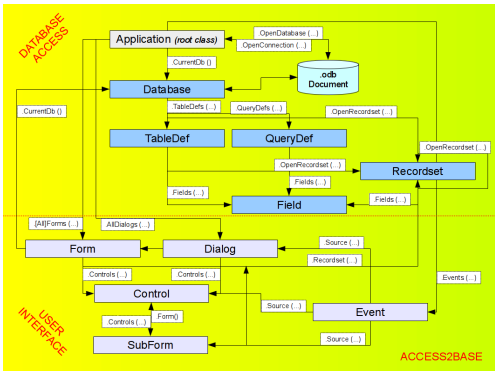
1.3 Feasibility – scripting

feasibility

1.3 SCRIPTING (SINCE VERSION 3.4) scripting	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Docked resizable Object Catalog pane, following selection in editing window. [-.- | 3.6]	-	++	▶
Docked resizable properties window. [-.- | 3.6]	-	+	
New menu item View -> Line Numbers that toggles line numbers in the editor window. [-.- | 3.5]	-	+	
New menu item View -> Goto Line. [-.- | 3.5]	-	+	
Dialog controls got a spinbutton. [-.- | 3.5]	-	+	
Possibility to export basic libraries from Excel documents. [-.- | 4.4]	-	+	
Improved error messages when Python UNO bridge fails to load. [-.- | 3.5]	-	+	
Python UNO can initialize the members of an UNO structure by name instead of by position. [-.- | 3.5]	-	+	▶
Debugging of user code (rule conditions and Python user functions. [-.- | 3.5]	-	+	
LibreOffice now bundles Access2Base, a simplified API for scripting of Base (and Writer database forms) in Basic. It is concise and easy to learn. [-.- | 4.2]	-	+	▶
Incompatible change: a checkbox bound to a (var)char (string) field will now write 'true' or 'false', instead of '1' or '0' (backwards compatible). [-.- | 4.2]	-	+	
Reference values in checkboxes are honoured. [-.- | 4.2]	-	+	
Changed the value returned from GetSolarVersion. [-.- | 4.4]	-	+	
ProcessEventsToIdle() method to the com.sun.star.awt.Toolkit service - calling this causes all pending rendering to be completed. [-.- | 4.4]	-	+	
Access2Base update: Methods which can meaningfully be used without a database connection are executable before any OpenConnection call. [-.- | 4.4]	-	+	
Access2Base update: A CloseConnection method has been added to free resources. [-.- | 4.4]	-	+	
Access2Base update: TempVars collection of TempVar objects. [-.- | 4.4]	-	+	
Access2Base update: New properties for (sub)forms: OrderBy and OrderByOn. [-.- | 4.4]	-	+	
Access2Base: The ApplyFilter and SetOrderBy actions now applicable on table or query datasheets, and on forms or subforms as well. [-.- | 4.4]	-	+	
Access2Base: The GoTorecord method is extended. [-.- | 4.4]	-	+	

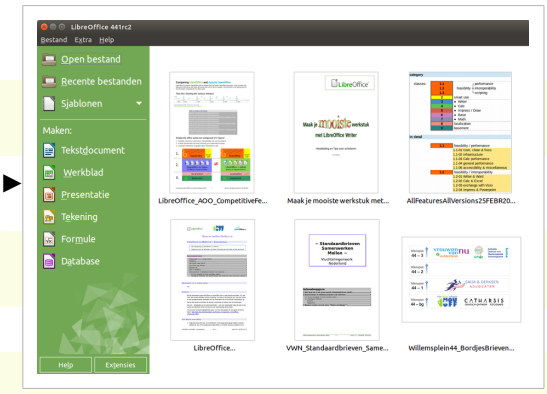



```
from com.sun.star.util import Date
d1 = Date(Year=2004, Month=11, Day=2)
d2 = Date(Day=2, Year=2007, Month=5)
```



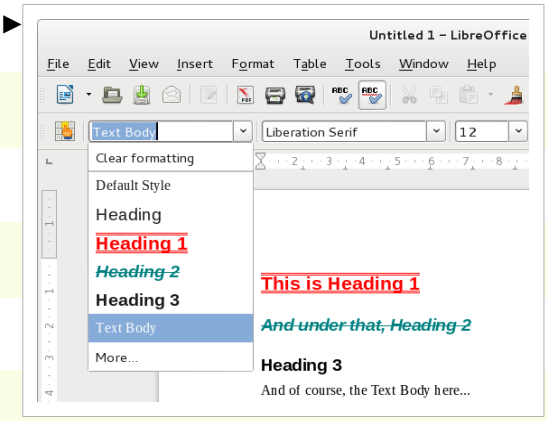
2. Smart use

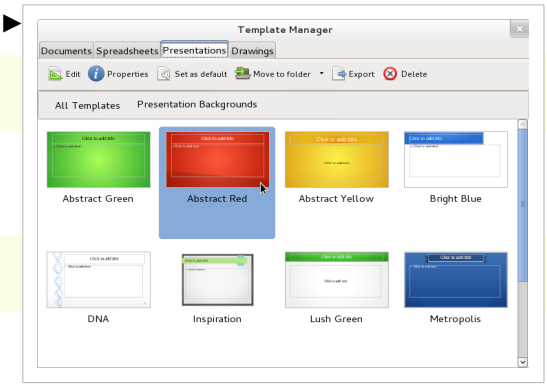
☺ smart use			
2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
GUI & start center	AOO 4.1	LO 4.4	
The start screen allows the user to glimpse recently-opened documents. You can drop files on it to open them. [-.- | 4.2]	-	++	
Preview of all file types in start center, not only ODF. Selectively delete Recent Documents. [-.- | 4.3]	-	++	
Templates now appear directly in the Start Center and can be picked from there. [-.- | 4.4]	-	++	
Recent Documents list is updated on Save, Save As and Close. [-.- | 3.6]	-	+	
Border around the Start Center removed. [-.- | 4.3]	-	+	
New templates included in the default installation. [-.- | 4.4]	-	+	

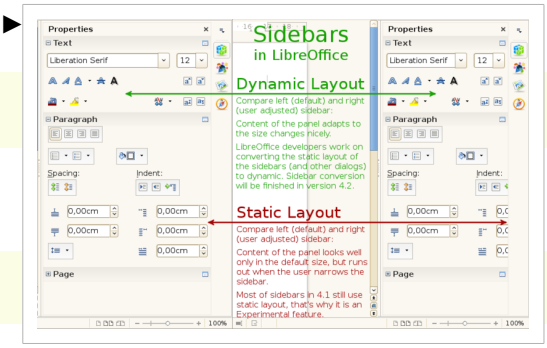


☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4) direct view & entry	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
"Apply Style" combobox in the toolbar now features previews of the styles to choose. [-.- | 4.0]	-	++	▶
Print dialog: page input field shows current page by default. [-.- | 3.5]	-	+	
Recent documents list support in the taskbar icon on Windows 7 and higher. [-.- | 4.2]	-	+	
More supported document types have been added to the "Open With" menu on Windows. [-.- | 4.2]	-	+	
Access Recent Documents directly from toolbar. [-.- | 4.1]	-	+	
Hide/Show styles in the “Styles & Formatting” dialog. [-.- | 4.0]	-	+	
New templates manager to bring the templates to the user. [-.- | 4.0]	-	+	▶
Infobar visibly when a document is being opened in read-only mode. [-.- | 4.2]	-	+	
A language combo box for character attribution with a field to specify a valid BCP 47 language tag. [-.- | 4.3]	-	+	
“Bullets” and “Numbering” toolbar buttons got a drop-down menu. [-.- | 4.4]	-	+	
Paragraph line spacing dropdown in the main toolbar. [-.- | 4.4]	-	+	
Support MATE and XFCE Desktops. [-.- | 4.2]	-	+	
GNOME3 Application Menu integration. [-.- | 4.2]	-	+	
Cleaner layout for the Start screen, also useful for netbooks. [-.- | 4.2]	-	+	

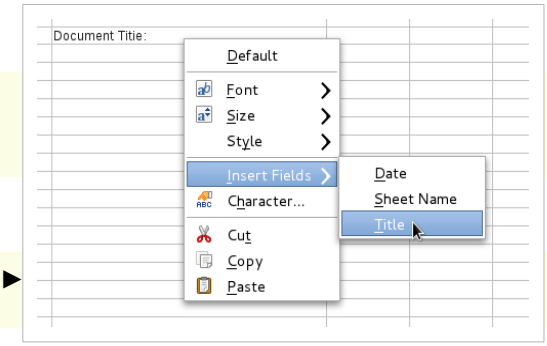


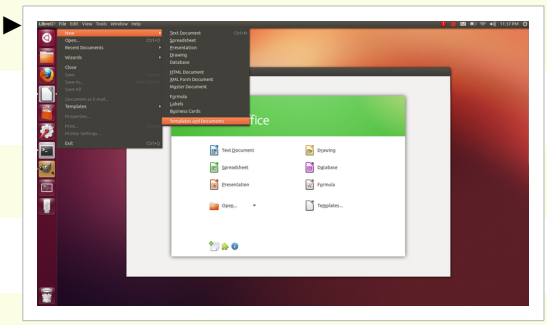


☺ smart use			
2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
sidebar	AOO 4.1	LO 4.4	
Sidebar (Apache OpenOffice/IBM Symphony) with resizeable layout (LibreOffice team). [4.0 | 4.1]	+	++	▶ 
Right-to-left\Left-to-right buttons on the Sidebar. [-.- | 4.2]	-	+	
Combining functionalities of the old “Gallery” and “Styles & Formatting” floating panels, gradually removing a lot of UI redundancy. [-.- | 4.4]	-	+	
Tabs icons as a toggle to open/close sidebar decks. [-.- | 4.4]	-	+	
Sidebar open by default in Writer, Calc and Draw showing just the tab icons. [4.0 | 4.4]	+	+	
Style tabs have new icons. [-.- | 4.4]	-	+	
The sidebar drop down menu now has a 'Close Sidebar' entry. [-.- | 4.4]	-	+	

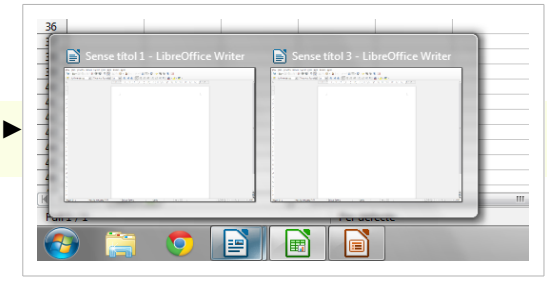
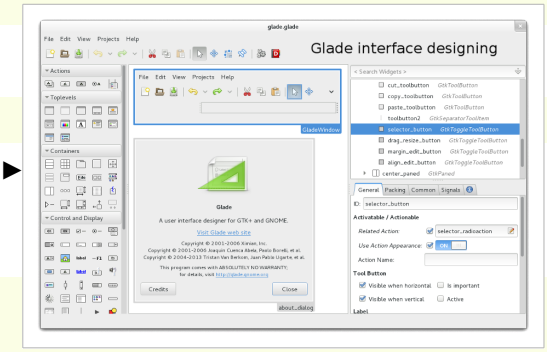
☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
GUI / contextmenu	AOO 4.1	LO 4.4	
Initial support for Unity and global menu support. [-.- | 3.4]	-	+	
Moved context-sensitive toolbars to the bottom to prevent them from overlaying important parts of the document. [-.- | 3.5]	-	+	
The command "Protect Sheet" is now also accessible from the context menu of the sheet tab. [-.- | 3.5]	-	+	
Added support for field items in cells (in editing mode). [-.- | 3.6]	-	+	▶
Calc now supports allowing pasting only text, value, or formula from the context menu. [-.- | 3.6]	-	++	
Sheets can now be hidden and/or shown by using the sheets tab context menu. [-.- | 3.6]	-	+	
Merge cells option added to right-click menu. [-.- | 3.6]	-	+	
Unity integration [only in Linux Distribution builds]. [-.- | 4.0]	-	+	▶
The full options of the ">>" overflow button can be shown by right-clicking the toolbar. [-.- | 3.6]	-	+	
Support Trinity Desktop Environment integration. [-.- | 3.6]	-	+	
Writer gives access the Paste Special dialog via the context menu. [-.- | 4.4]	-	+	
Cut, Copy and Paste actions now at the top of the context menu. [-.- | 4.4]	-	+	

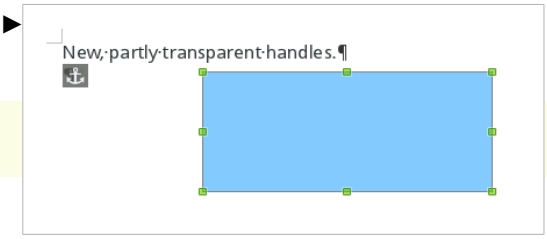
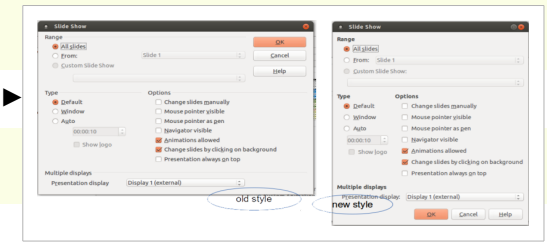
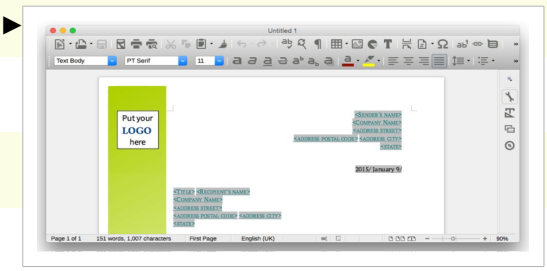
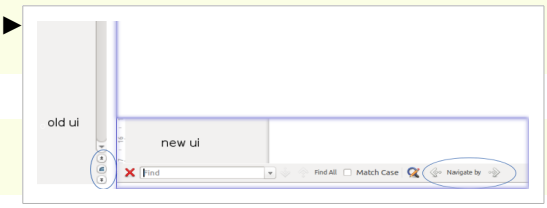




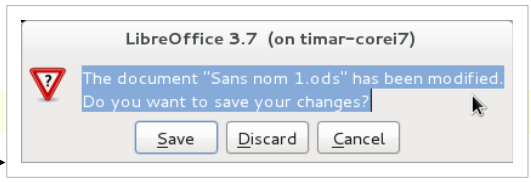
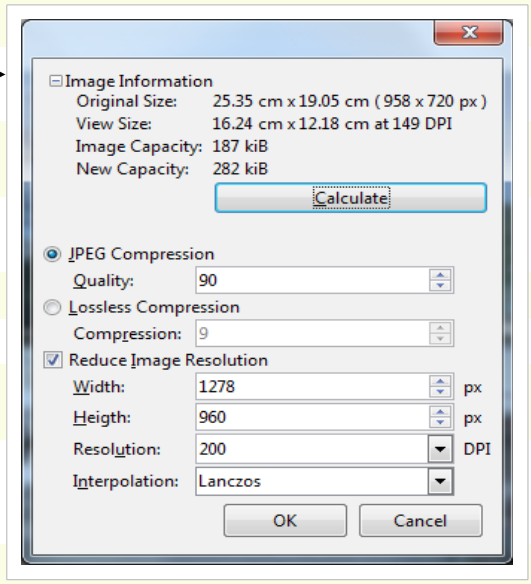
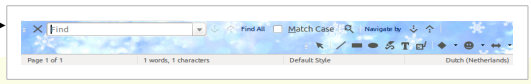
☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
dialogs	AOO 4.1	LO 4.4	
Improve gtk+ theme integration, LibreOffice looks more native. Fix menu separators, Alt key issues, Toggle buttons, widget rendering details. [-.- | 3.4]	-	+	
Windows are now grouped together by application in the taskbar on Windows 7 and higher. [-.- | 4.2]	-	+	▶ 
GTK+ right-to-left interface glitches are more RTL-aware and consistent with native GTK+ applications. [-.- | 3.5]	-	+	
GTK themes can render the background gradient. [-.- | 3.6]	-	+	
GTK themes have a way for tab prelight rendering. [-.- | 3.6]	-	+	
GTK theming for fixed lines and frames. [-.- | 3.6]	-	+	
introduction of an infrastructure to build user interface dialogs and windows with the XML-based .ui format of GtkBuilder/Glade. All dialogs and tabs (.src-based) are converted. [-.- | 4.4]	-	+	▶
Click behaviour status bar was unified: left-click results in action or dialog, right-click in a context menu. [-.- | 4.4]	-	+	

☺ smart use

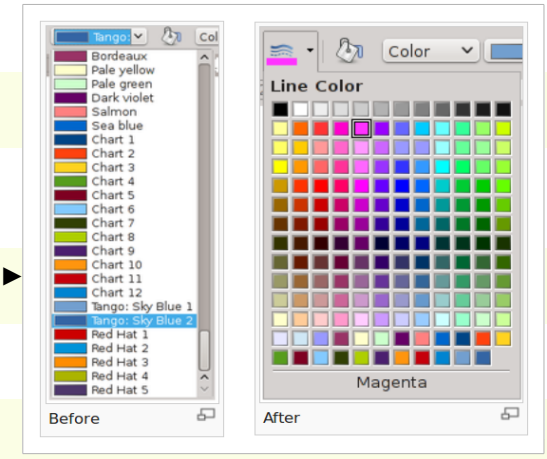
2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
fresh look	AOO 4.1	LO 4.4	
New object handles that use alpha transparency to improve usability. "Large" handles were removed at the same time. [4.0 | 3.5]	+	+	▶ 
Rulers are now much cleaner and more light-weight. [-.- | 3.6]	-	+	
Redesigned "About" dialog for a cleaner look. [-.- | 3.6]	-	+	
Ruler enhancements: show ticks above numbers. [-.- | 4.2]	-	+	
More Well-Sized Dialogs. [-.- | 4.1]	-	++	▶
Multirow tab dialog tab balancing, avoiding single orphan tabs. [-.- | 4.2]	-	+	
New icon set Sifr, designed for non-distracting icons to help concentrate on the document. [-.- | 4.2]	-	+	
Default Sifr icon theme on OS X. [-.- | 4.4]	-	+	▶ 
Background color is tweaked and unified with that of the rulers, streamlining the default look. [-.- | 4.3]	-	+	
Update of the Tango icon set and new icons Sidebar. [-.- | 4.3]	-	+	
improved icons for Tango, Sifr, and Oxygen themes. [-.- | 4.4]	-	+	
The Navigation buttons moved from below the scrollbar to the Find bar. [-.- | 4.3]	-	+	▶ 
The tabs have an updated look. [-.- | 4.4]	-	+	
Rulers got smaller numbers, and hidden by default. [-.- | 4.4]	-	+	
New browser for Firefox themes including search and preview. [-.- | 4.4]	-	+	

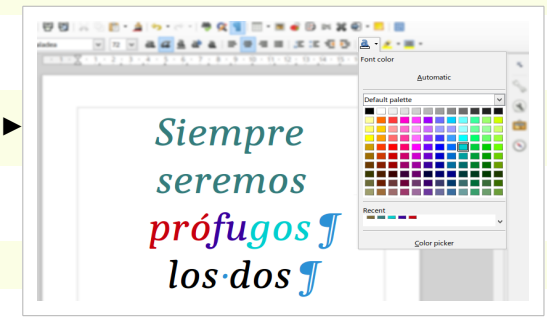
☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4) handi	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Find bar behaves more like in Firefox or Evolution. Is hidden by default, is wider as to fit text for Search and Replace dialog. [-.- | 3.4]	-	++	
Added Scan button to the scan dialog unix. [-.- | 3.5]	-	+	
Select and copy text from message boxes. [-.- | 4.0]	-	+	▶ 
Visual appearance of the Autofilter popup window and the ability to allow multiple selections. [-.- | 3.5]	-	+	
Extension Manager dialog got 3 checkboxes to allow the selection of the type of extension: Bundled (Installation), Shared and User, or a combination. [-.- | 3.5]	-	+	
Improved dialog when saving in other formats than ODF. [-.- | 3.5]	-	+	
Lanczos algorithm for resizing of images. [-.- | 3.6]	-	+	
Allow for editing of read-only documents. [-.- | 3.6]	-	+	
Graphics can be resized and recompressed with the Compress Graphics popup menu function. [-.- | 4.0]	-	+	▶ 
Add File in Recent Documents menu. Added a Clear List feature. [-.- | 4.1]	-	+	
Delete multiple styles at once from Styles and Formatting dialog. [-.- | 4.1]	-	+	
Add a “Close Search” button to search bar. [-.- | 4.1]	-	+	
“Match Case” option added to the find bar. [-.- | 4.1]	-	+	
Make Find hotkey Ctrl+F a toggle command for the Find bar. [-.- | 4.1]	-	+	
Better Quick search with Find bar (Ctrl+F), no influences of invisible options from the search-and-replace dialog. [-.- | 4.2]	-	++	
Default proportionally image scaling in Calc and Impress/Draw (as they were already in Writer). [-.- | 4.4]	-	+	
"Find All" added to the Find bar. [-.- | 4.2]	-	+	▶ 
Turn Rulers on or off by key Ctrl+⇧ Shift+R. [-.- | 4.4]	-	+	
Special characters can be inserted/removed at the location of the cursor in the field. [-.- | 4.4]	-	+	
Simply input of special symbols by default. Autocorrection: Trademark, copyright, reg. Symbol. [-.- | 4.4]	-	+	

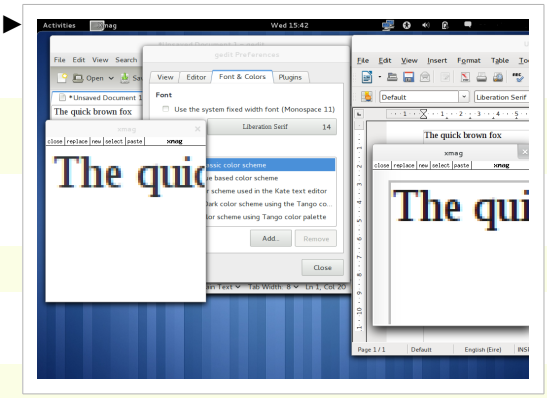
☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
color choice	AOO 4.1	LO 4.4	
The color picker is rewritten to be more usable. [3.4 | 3.5]	+	+	
Color previews for 'Automatic' colors in the combo drop-downs. [-.- | 3.5]	-	+	
Writer and Calc use split color buttons making it possible to apply the last used color with one click. [-.- | 3.6]	-	+	
Line color picker changed from list to a color palette. [-.- | 4.3]	-	+	▶
In the Math Formula editor you may add colors directly from the Elements Dock by clicking. [-.- | 4.2]	-	+	
Color pickers improved for: Font color (Impress, Draw), Font color of drawing objects (Writer, Calc), Line color, 3D Extrusion color. [-.- | 4.3]	-	+	
New Color Selector with recently used document colors. [-.- | 4.4]	-	+	
Support for different color palettes and for .gpl GIMP palette format. [-.- | 4.4]	-	++	▶
Color Selector allows to directly open the color picker and choose another color. [-.- | 4.4]	-	+	

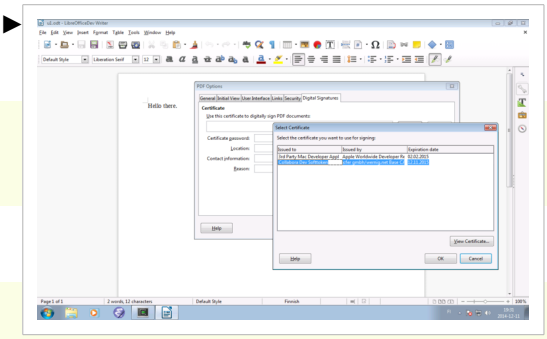




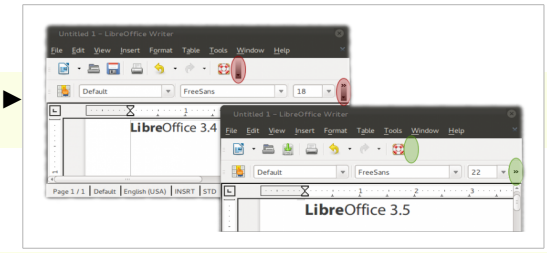
☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
displaying	AOO 4.1	LO 4.4	
Linux text-rendering improvements by drawning via Cairo with the common subpixeling options. [-.- | 3.4]	-	+	▶ 
Combining diacritics for scientific typesetting and localization. [-.- | 3.5]	-	+	
New Widget layout technique for dialog windows. [-.- | 4.0]	-	++	
Zooming based on a geometric progression. [-.- | 3.6]	-	+	
Improve quality of displaying images in documents. [-.- | 4.0]	-	+	
Improve display Recent Documents list. [-.- | 4.1]	-	+	
Gallery can get sensible a name (e.g. mygallery.thm). [-.- | 4.1]	-	+	
Galleries are created at compile time from a flat list of files. [-.- | 4.1]	-	+	
New Gallery Images (IBM Symphony). [4.0 | 4.1]	+	+	▶
Respect accessibility requirements, but also let dark theme users have decent default colors. [-.- | 4.2]	-	+	
Native rendering toolbars background OSX. [-.- | 4.3]	-	+	
Initial HiDPI support. [-.- | 4.3]	-	+	
Large icons by default on Windows, as they are on Linux and Mac OS. [-.- | 4.4]	-	+	

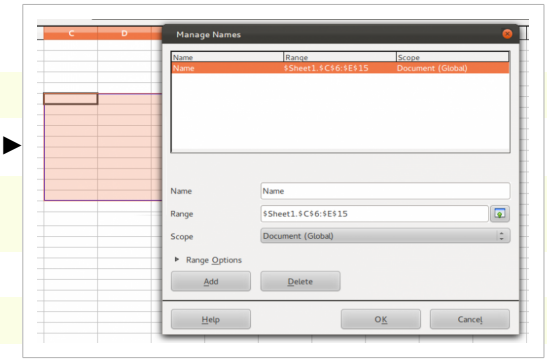
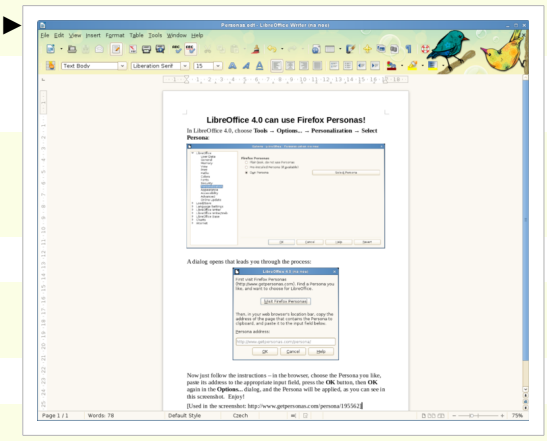
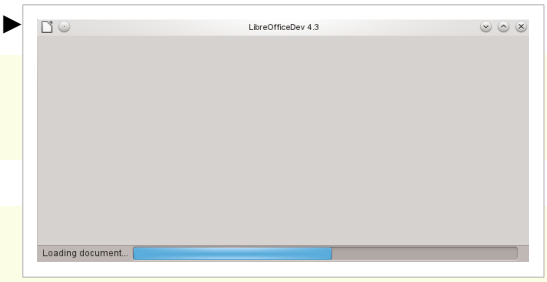
☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4) pdf handling	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Directly digital signed PDF's during the export. The Windows built-in certificate functionality is used to store your certificates for signing. [-.- | 4.4]	-	++	▶ 
Better handling of export to pdf for hidden slides. Per default, hidden slides are excluded, but they can be included per check-box. [-.- | 3.5]	-	+	
PDF Export user interface with Watermark option. [-.- | 3.6]	-	+	
PDF Import, Presenter Console and Python Scripting Provider are no longer bundled extensions but core. [-.- | 4.0]	-	+	
Always embedding the standard PostScript core font set in PDF exports. [-.- | 4.2]	-	+	
Enhanced chart visualisation - better quality rendering / print and PDF export of charts. [4.1 | 4.0]	+	+	

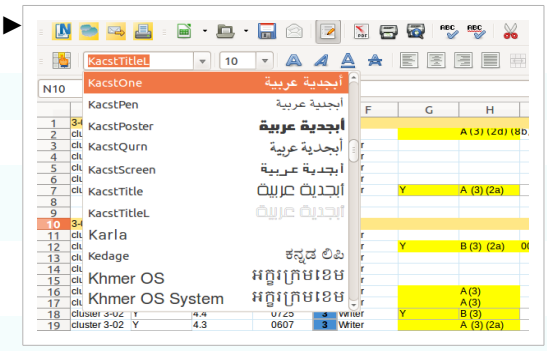
☺ smart use

2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4) cleanup	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Initial port added to gtk3, and hence via Broadway a web office prototype. [-.- | 3.5]	-	+	
The unused toolbar menus are removed, and the indication of hidden items is updated. [3.4 | 3.5]	++	+	▶
Cleanup of 3D borders in rulers and status bars. Improved look through the background gradient. [-.- | 3.6]	-	+	
No dictionary choice when there is only one active. [-.- | 3.6]	-	+	
End of 72 pt limitation of the Increase font button. [-.- | 4.3]	-	+	
Font, Font size and alignment formatting removed from context menu in Writer. [-.- | 4.4]	-	+	

☺ smart use

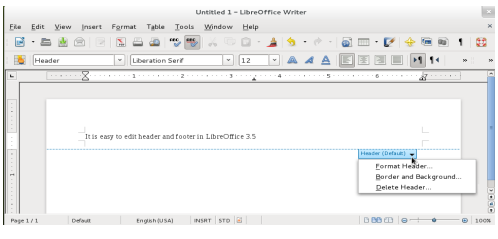
2 INTERFACE, LOOK, DIALOGS, ETC. (SINCE VERSION 3.4) miscellaneous	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Change the password in open encrypted document. [-.- | 3.4]	-	+	
Typing "http:" no longer auto-capitalizes. [-.- | 3.4]	-	+	
Redesigned all range name dialogs. [-.- | 3.5]	-	+	▶ 
Pleasantly adapting to Linux mouse pointer themes. [4.0 | 3.4]	+	+	
Rotate through case changes. [-.- | 3.4]	-	+	
Natural Sorting in Menu list. [-.- | 3.5]	-	+	
Macro recording activation with a separate option. [-.- | 3.6]	-	+	
Added "Support for assistive technology tools" to installation process. [-.- | 3.6]	-	+	
Non-native template files possible files in the templates management interfaces. Templates from other office suites are now handled like ODF ones. [-.- | 4.0]	-	+	
Support Firefox Personas in LibreOffice. [-.- | 4.0]	-	++	▶ 
Firefox themes now apply also to bottom toolbars. [-.- | 4.4]	-	+	
Unify Popup menu option Save Graphic... from Writer and Save as Picture... from Draw and Impress to Save Graphic.... [-.- | 4.0]	-	+	
Possibility to select interpolation algorithm. [-.- | 4.0]	-	+	
GStreamer 1.0 support added and re-factor existing gstreamer code. [-.- | 4.0]	-	+	
New ICU Regular Expression Engine. [3.4 | 4.0]	+	+	
Smiling Smiley. [-.- | 4.2]	-	+	
An Expert Configuration functionality has been added to the Options tab. [-.- | 4.2]	-	+	
On Windows there is a new experimental accessibility bridge supporting IAccessible2 (IA2), based on code from IBM. [-.- | 4.2]	-	+	
DOCX import now has a progressbar. [-.- | 4.3]	-	+	▶ 
Added new, specialized accesiibility roles for specific text, spreadsheet and presentation documents. [-.- | 4.3]	-	+	
Improve mapping ATK and LibreOffice roles. [-.- | 4.3]	-	+	
IAccessible2 is now the only assistive technology support option on Windows. [4.1 | 4.3]	+	+	
About dialog locale Wikipedia logo v3.svg. [-.- | 4.4]	-	+	
UI text improvements. [-.- | 4.4]	-	+	

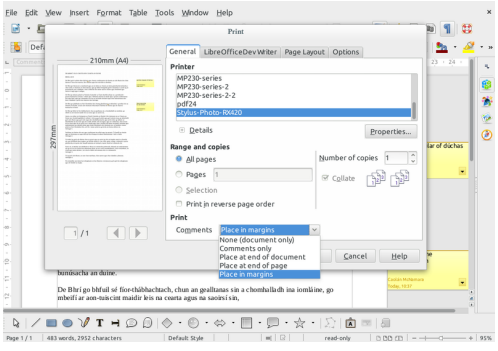
3. Writer

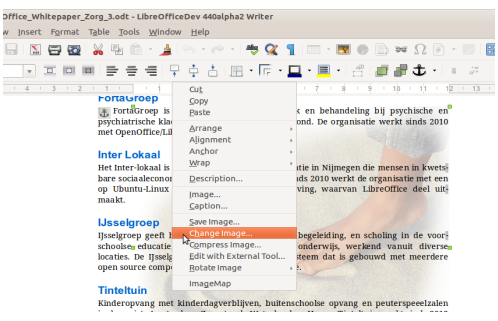
Writer			
3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
direct view & entry	AOO 4.1	LO 4.4	
Internationalized font previews in a drop-down selector. [-.- | 3.4]	-	++	▶ 
Changing text boundaries is edited. [-.- | 3.5]	-	+	
Better page breaks indicators. [-.- | 3.5]	-	+	
Displaying non-printable characters on end of line. [-.- | 3.5]	-	+	
Display bitmap image resolution in PPI (pixel/inch) in Format - Picture - Crop tab page. [-.- | 3.5]	-	+	
The style dropdown now has a split menu to edit or update the current style. [-.- | 4.4]	-	++	

Writer

3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
handi	AOO 4.1	LO 4.4	
Better UI for Header and Footers handling. [-.- | 3.5]	-	+	▶
Quickly edit or remove headers and footers. [-.- | 3.5]	-	+	
Pressing "Ctrl+[" will decrease or "Ctrl+]" will increase the font size of the selected text. [-.- | 3.6]	-	+	
Table AutoFormats record extra table-level properties like Break, Repeat heading, Merge line styles, etc... [-.- | 3.6]	-	++	
Clicking fields selects them instead of placing the cursor before them. [-.- | 4.0]	-	+	
Print comment next to the text in the right margin as they appear on screen. Pages are scaled down to fit on the underlying paper size. [-.- | 4.3]	-	++	▶
Wildcards in autocorrection. [-.- | 4.2]	-	+	
Select-All works in the special situation when the document starts with a table. [-.- | 4.2]	-	+	
Hide or delete styles in the Style and Formatting window. [-.- | 4.2]	-	+	
Master Document Templates, they create a Master Document with the same initial content as the Template. [-.- | 4.4]	-	+	
In-place editing of input fields. [4.1 | 4.2]	+	+	
Option to change the currently selected image to another graphic via the context menu, reaching feature parity with Impress and Draw. [-.- | 4.4]	-	++	▶

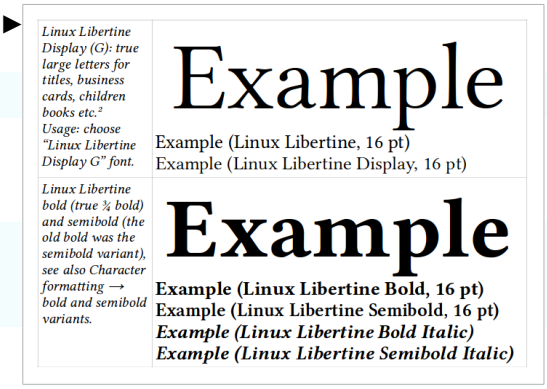


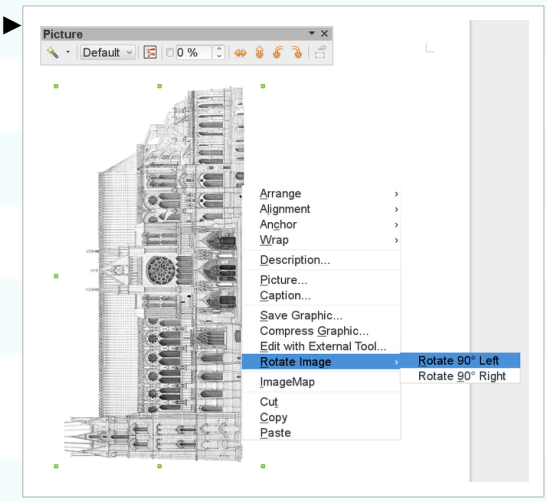


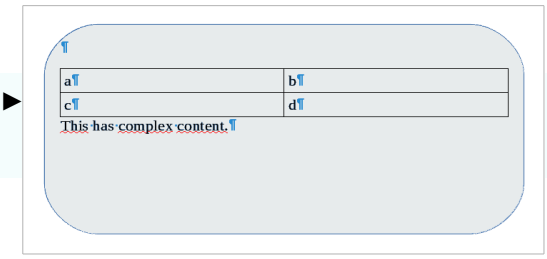


Writer

3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
lay-out & style	AOO 4.1	LO 4.4	
Linux Libertine typeface updated: ttfautohint, better small cap.s, double stroke and italics. [-.- | 3.5]	-	+	▶
Liberation fonts included in Windows builds. [-.- | 3.5]	-	+	
Four new open-source font families: Open Sans (Ascender), PT Serif (ParaType), Source Code Pro and Source Sans Pro (Adobe). [-.- | 4.0]	-	+	
Allow extra word boundary characters. Overriding long dash (—) and short dash (–) for counting words. [-.- | 4.0]	-	+	
Improved Footnote and footer comment handling. [-.- | 4.1]	-	+	
Writer textframes support gradient as background. [-.- | 4.1]	-	+	
Comments to text ranges over multiple paragraphs. [-.- | 4.1]	-	+	
Easy images rotation 90 degree increments. [-.- | 4.1]	-	+	▶
Typesetting: fixed line breaking at hard hyphens and at words before punctuation marks. [-.- | 4.2]	-	+	
Format one or more characters with a border. Supports: odt, html, doc, docx, rtf. [-.- | 4.2]	-	+	
Vertical alignment of text supported for text frames. [-.- | 4.3]	-	+	
Proportional Image scaling by default, free resizing is available holding ⇧ Shift. [-.- | 4.3]	-	++	
Added Caladea and Carlito fonts to the installation, with same metrics and proportions as Microsoft's Cambria and Calibri. [-.- | 4.4]	-	++	
Character properties of all comments can be set at the same time now in order to reformat all. [-.- | 4.3]	-	+	
16bit (65,535) characters limitation of Writer paragraphs is raised to 32bit (2,147,483,647). [-.- | 4.3]	-	++	
Writer shapes can now have a Textbox, so that complex content and full drawinglayer geometry for a shape work at the same time. [-.- | 4.4]	-	++	▶
Dash replacement between numbers, wildcard patterns in the default Autocorrect lists. Also in Impress, Calc and Draw. [-.- | 4.4]	-	+	

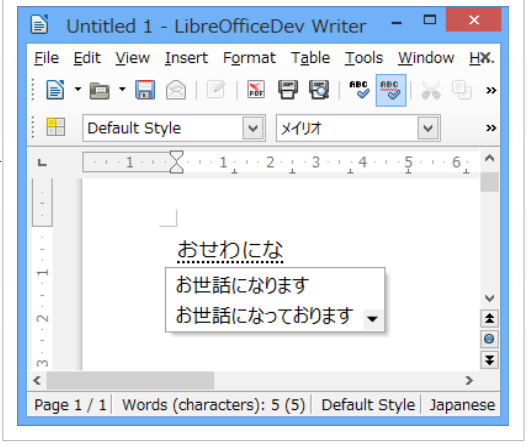


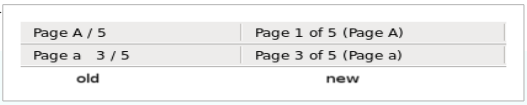




Writer

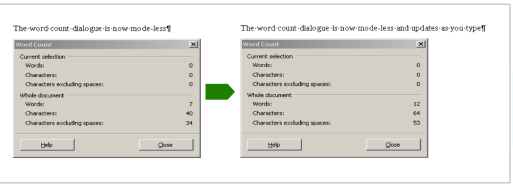
3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
fresh look	AOO 4.1	LO 4.4	
New gradient/drop-shadow to highlight writer pages, with configurable colors in the options. [-.- | 3.4]	-	+	
Text Boundaries shown depending on the choice to display unprintable characters. [-.- | 3.6]	-	+	
On Windows, modern IMEs show their suggestion windows at easy-to-read position. [-.- | 4.1]	-	+	
Comments bar toggling with a button in the ruler. [-.- | 4.1]	-	+	
Non-printing Characters in "Solarized blue". [-.- | 4.3]	-	+	
Reorganized “Standard” and “Formatting” toolbars, removing features and replace more commonly used ones. [-.- | 4.4]	-	+	
Page number styles in the statusbar are more easy to understand for complexer situations. [-.- | 4.4]	-	+	
Tooltips were added to all elements of the statusbar. [-.- | 4.4]	-	+	





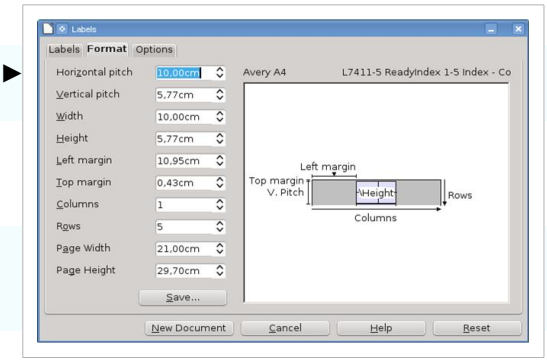
Writer

3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
word & character counting	AOO 4.1	LO 4.4	
The word count dialog is modeless and updates as you type. [-.- | 3.5]	-	+	
Update Word Count. Word Count now on status bar. [-.- | 3.6]	-	+	
Word and character count got thousand separators. [-.- | 4.4]	-	+	
Asynchronous word-count. For large documents don't defer rendering the document and status bar until we've word-counted it. [-.- | 4.1]	-	+	



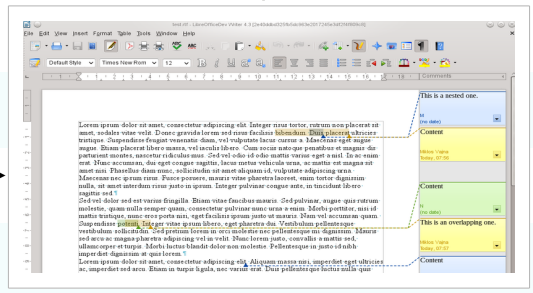
Writer

3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
labels	AOO 4.1	LO 4.4	
Existing user defined labels are automatically extended with form size. [-.- | 3.6]	-	+	
The form size for label can be entered/modified in the wizard dialog. [-.- | 3.6]	-	+	
Label / Business Card Wizard Extension of label definitions with form and size. Labels are centered correctly on the form. [-.- | 3.6]	-	++	
1700+ predefined label definitions are modified to include the form size, obsolete definitions removed. [-.- | 3.6]	-	++	
Label printing positioning fixed. [-.- | 3.5]	-	+	
Recalculation of label positions. Definitions with a gap between labels, wider than the right margin, now produce correct documents. [-.- | 3.6]	-	+	

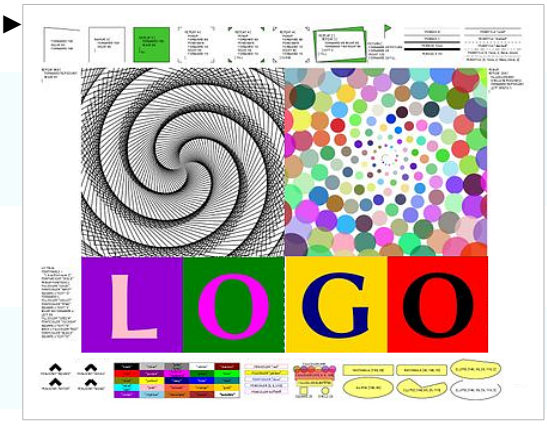


Writer

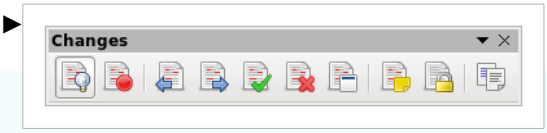
3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
embedding	AOO 4.1	LO 4.4	
Embedding images into HTML files enables sending merge mails with images in HTML format. [-.- | 4.2]	-	++	
Enable attaching comments to document text ranges. [-.- | 4.0]	-	+	
Import and export of nested comments in the odf, doc, docx and rtf filters. [4.1 | 4.3]	++	++	
Auto-generated tables of contents contain hyperlinks to the relevant pages by default. [-.- | 3.5]	-	+	



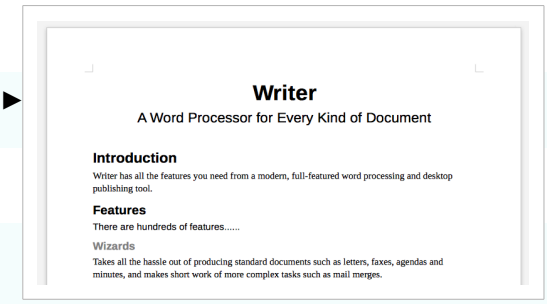
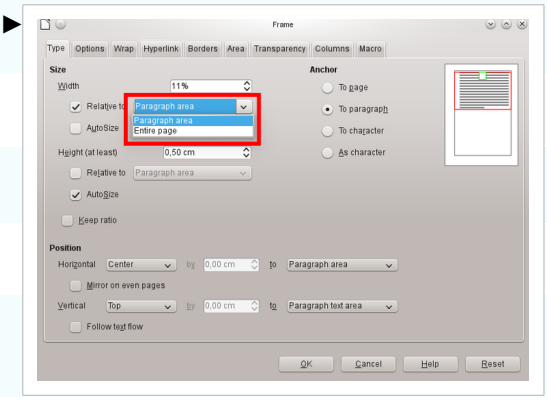
Writer

3 writing, style, templates, etc. (since version 3.4) LibreLogo	OFFICE SUITE AOO 4.1	 LO 4.4	ILLUSTRATION
"LibreLogo" vector graphics with Logo toolbar and interpreter. [-.- | 4.0]	-	++	▶ 
LibreLogo PENCAP/LINECAP feature. Stable batch generation of cropped SVG images. Optional looping of SVG animations. SVG image path of PICTURE is relative to the path of the document. [-.- | 4.2]	-	+	
PENTRANSPARENCY, FILLTRANSPARENCY to set transparency after PENCOLOR, FILLCOLOR usage. [-.- | 4.3]	-	+	
Color and transparency gradients are supported via FILLCOLOR and FILLTRANSPARENCY commands. [-.- | 4.3]	-	+	

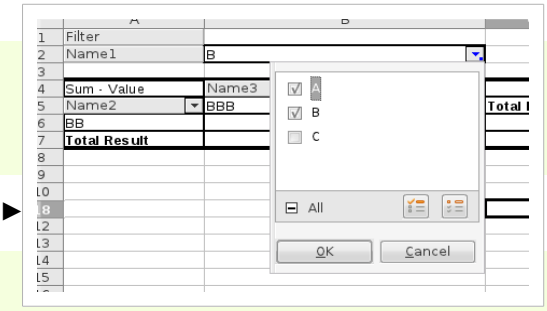
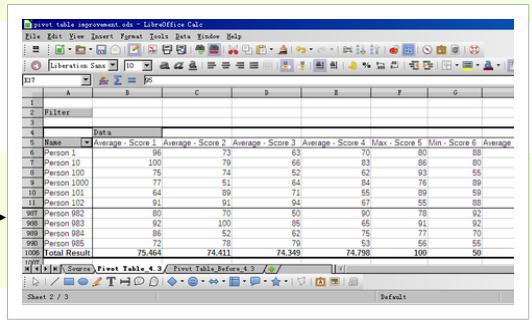
Writer

3 writing, style, templates, etc. (since version 3.4) track changes	OFFICE SUITE AOO 4.1	 LO 4.4	ILLUSTRATION
New buttons in the Track Changes toolbar, along with a new set of icons. [-.- | 4.4]	-	+	▶ 
Menu item renamed from 'Changes' to the commonly recognized 'Track Changes'. [-.- | 4.4]	-	+	
Default behavior 'Accept Change' and 'Reject Change' in the context menu changed to automatically jump to next change. [-.- | 4.4]	-	+	
Keyboard shortcut Ctrl+⇧ Shift+E now associates with the recording of track changes. [-.- | 4.4]	-	+	
Spellcheck popup menu allows for for change tracking operations. [-.- | 4.2]	-	+	

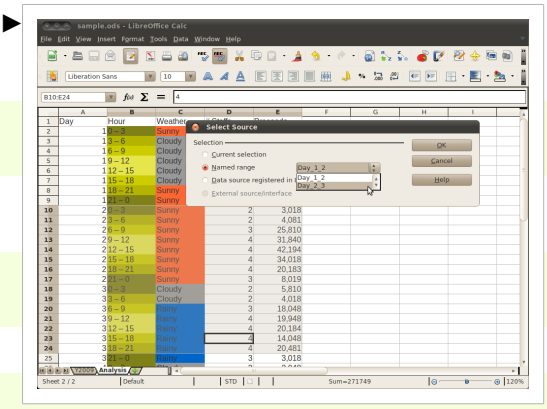
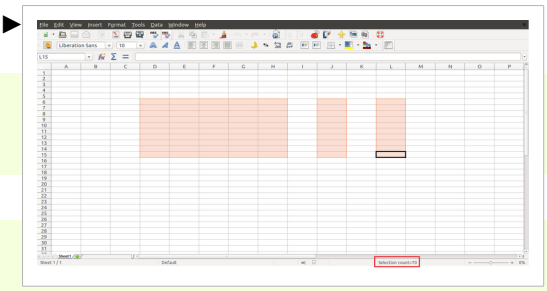
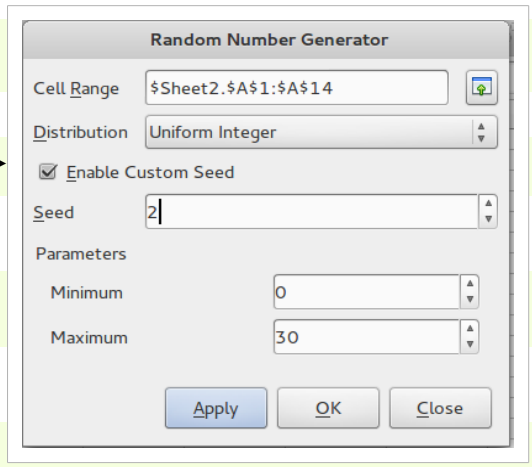
Writer

3 writing, style, templates, etc. (since version 3.4)	OFFICE SUITE		ILLUSTRATION
miscellaneous	AOO 4.1	LO 4.4	
Paintbrush format can apply automatic formatting for characters, different from those in the paragraph. [-.- | 3.6]	-	+	
New Default Template based on feedback from discussions. [-.- | 4.2]	-	+	▶ 
AutoCorrection of border enhanced: differences are more visible. [-.- | 4.2]	-	+	
Cross references of headings don't contain footnote nrs in headers, tips of references and dialog Fields. [-.- | 4.2]	-	+	
Increase/decrease font functionality to drawing objects. [-.- | 4.3]	-	+	
Multiple relations supported for relative size of text frames. [-.- | 4.3]	-	+	▶ 
Line numbering can be enabled in a single location, in addition to the existing per-style method. [-.- | 4.4]	-	+	
Improved spacing between elements at the status bar for low res screens. [-.- | 4.4]	-	+	
Addition of a 'Wrap Text' button at the status bar. [-.- | 4.4]	-	+	
Bookmarks in Navigator can be named using any character that is accepted in HTML anchor names. [-.- | 4.4]	-	+	
Default “ASCII arrow” autocorrect patterns (->, <-): A->B->C → A→B→C improved. [-.- | 4.4]	+	+	
Autocorrect replacements of arbitrary suffixes and prefixes. Add .*text.*-like patterns to correct common typing errors within words. [-.- | 4.4]	-	+	

4. Calc

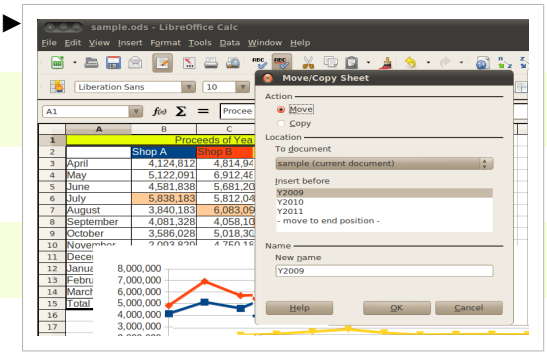
Calc			
4 SPREADSHEETS (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
pivottables / datapilots	AOO 4.1	LO 4.4	
DataPilot is renamed Pivot Table. [3.4 | 3.4]	+	+	
it is now possible to use a named range as the data source. This allows addition of new rows to the data source and updating, without manually changing the data source range in the dialog. [-.- | 3.4]	-	++	
Pivot Table: Support multiple selections in page field of pivot table. [-.- | 4.0]	-	++	▶ 
Support for unlimited number of fields: no limitation to 8 column/row/data fields and 10 page fields. [-.- | 3.4]	-	++	
The internal implementation of DataPilot has been re-worked in order to fix several regressions especially with regard to refresh DataPilot tables. [-.- | 3.4]	-	+	
Pivot Table layout improvement "Data" field is now on columns by default, and can be moved to rows if needed. It helps to faster generate of useful pivot tables from large data sources. [-.- | 4.3]	-	+	▶ 

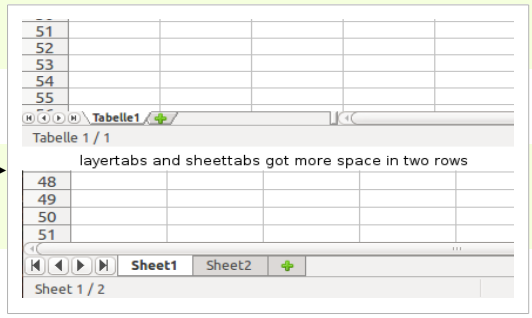
Calc

4 SPREADSHEETS (SINCE VERSION 3.4) new functions	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Named ranges in sheet-local scope instead of entire document. The named range dialog has been modified to reflect this. [-.- | 3.4]	-	+	▶ 
New Calc Functions BITAND, BITOR, BITXOR, BITRSHIFT and BITLSHIFT (ODF 1.2 specification). [-.- | 3.5]	-	+	
New Calc Functions SEC, CSC, SECH and CSCH, as declared in the ODF 1.2 specification. [-.- | 3.5]	-	+	
New spreadsheet functions (ODF OpenFormula). [3.4 | 3.6]	+	++	
DATEDIF. [-.- | 3.6]	-	+	
IMTAN, IMSEC, IMCSC, IMCOT, IMSINH, IMCOSH, IMSECH and IMCSCH. [-.- | 3.6]	-	+	
Now in spreadsheet: Count the number of selected cells. [-.- | 4.1]	-	+	▶ 
Available: AVERAGEIF, SUMIFS, AVERAGEIFS and COUNTIFS as defined in ODF OpenFormula. [4.0 | 4.0]	+	+	
Import color scales and data bars from xlsx. [-.- | 4.0]	-	+	
Available: IFERROR and IFNA (ODF OpenFormula). [-.- | 4.0]	-	+	
Re-implemented RAND() function with better random number generation algorithm. [4.0 | 4.0]	+	+	
Pricing Add-In containing spreadsheet functions for option pricing in particular barrier (OPT_BARRIER(...)) and touch (OPT_TOUCH(...)) options. [-.- | 4.0]	-	+	
XOR as defined in ODF OpenFormula. [-.- | 4.0]	-	+	
NUMBERVALUE as defined in ODF OpenFormula. [-.- | 4.1]	-	+	
SKEWP as defined in ODF OpenFormula. [-.- | 4.1]	-	+	
Random number generation. [-.- | 4.2]	-	+	▶ 
WEBSERVICE and FILTERXML spreadsheet functions for access to web data. [-.- | 4.2]	-	+	
LEFTB, LENB, MIDB and RIGHTB working on DBCS double byte character strings. [4.0 | 4.2]	+	+	
CHISQ.DIST, CHISQ.DIST.RT, CHISQ.INV, CHISQ.INV.RT,CHISQ.TEST. [-.- | 4.2]	-	+	
At random number generation user can optionally limit the number of decimal places in generation. [-.- | 4.3]	-	+	

Calc

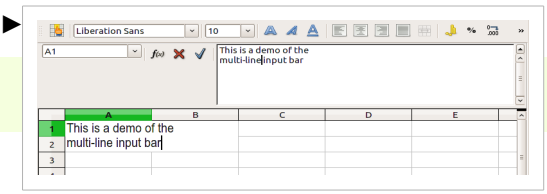
4 SPREADSHEETS (SINCE VERSION 3.4) sheets and tabs	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Redesigned Move/Copy Sheet dialog to improve its ergonomics. [-.- | 3.4]	-	++	▶
Specify the initial number of sheets in new documents. [-.- | 3.5]	-	+	
New option to specify a custom sheet name prefix in new documents. [-.- | 3.6]	-	+	
Improved error message for invalid sheet name. [-.- | 3.6]	-	+	
Default number of sheets has been changed to 1. [-.- | 3.6]	-	+	
Right-click context menu on bottom left scrollbar arrows to switch sheets. [-.- | 4.2]	-	+	
When expanding the space available for sheet tabs make better use of that. [-.- | 4.3]	-	+	
Sheet tabs (Calc) and layer tabs (Draw) are moved to an independent row and are no longer displayed next to the horizontal scrollbar. [-.- | 4.4]	-	+	▶
The right-click context menu that appear for managing sheets got icons for sheet operations. [-.- | 4.4]	-	+	

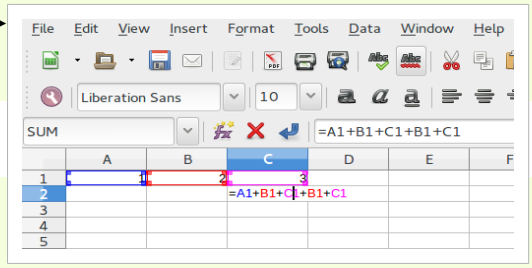




Calc

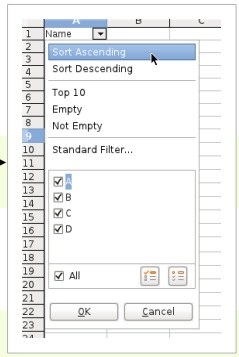
4 SPREADSHEETS (SINCE VERSION 3.4) direct view and entry	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
New multiline inputbar. [-.- | 3.5]	-	++	▶
Differentiated different error messages in CSV import handling. [-.- | 3.6]	-	+	
XML Source dialog to quickly import arbitrary XML content. [-.- | 4.0]	-	+	
Smarter highlighting of cell in a formula – Border highlight on multiple instances of the same cell, when selecting a formula, got same color. [-.- | 4.3]	-	+	▶
When selecting cells, the number of selected rows and columns is shown in the status bar. [-.- | 4.3]	-	+	
Implemented 'Find All' also in case of 'search in all sheets' option - creates a dialog describing matching cells. [-.- | 4.2]	-	+	





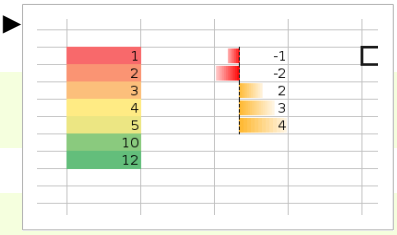
Calc

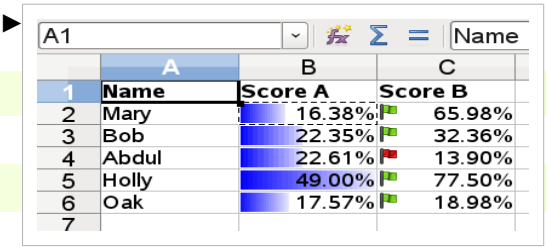
4 SPREADSHEETS (SINCE VERSION 3.4) autofilter	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Possibility to set autofilter per sheet without manually creating named database ranges prior to setting autofilter. Previously Calc only supported one autofilter per document. [-.- | 3.4]	-	+	
Calc allows sorting of data from the autofilter menu. [-.- | 3.6]	-	++	▶
Support "type-ahead" search in the autofilter popup. Possibility to search for specific entry via key input. [-.- | 4.0]	-	+	



Calc

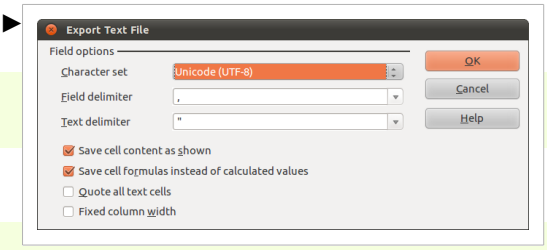
4 SPREADSHEETS (SINCE VERSION 3.4) conditional formatting	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
New dialogs for conditional formats to support color scales and data bars. [-.- | 3.6]	-	++	▶
Unlimited number of rules for conditional formatting. [-.- | 3.5]	-	+	
Export conditional formatting to .xlsx. [-.- | 3.6]	-	+	
Improved conditional format dialogs. [-.- | 4.0]	-	+	
New conditional formats: Date formats, Top/Bottom rules, String rules. [-.- | 4.0]	-	+	▶





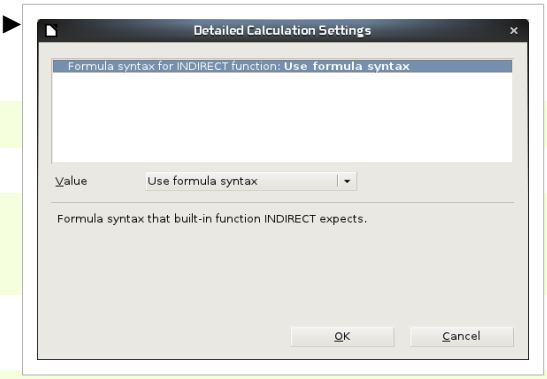
Calc

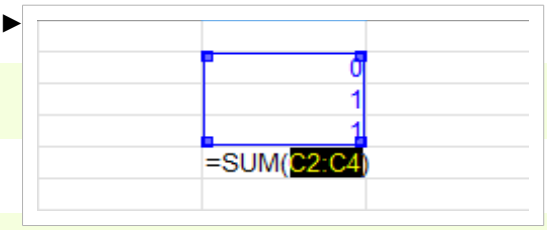
4 SPREADSHEETS (SINCE VERSION 3.4) number import and csv handling	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Added a "Save cell formulas instead of calculated values" option to CSV export. [-.- | 3.6]	-	+	▶
Handling of broken CSV files that are not following RFC 4180 quote rules. [-.- | 3.6]	-	+	
Import numbers in scientific notation without having to check "import special numbers". [-.- | 3.6]	-	+	
Better initial default separators, comma, semicolon and tab. [-.- | 3.6]	-	+	
Handle lines with more than 64k characters. [-.- | 3.6]	-	+	



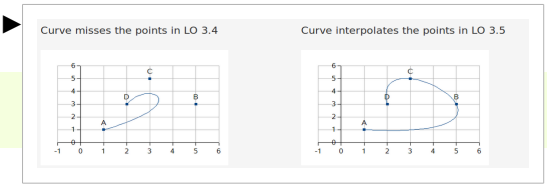
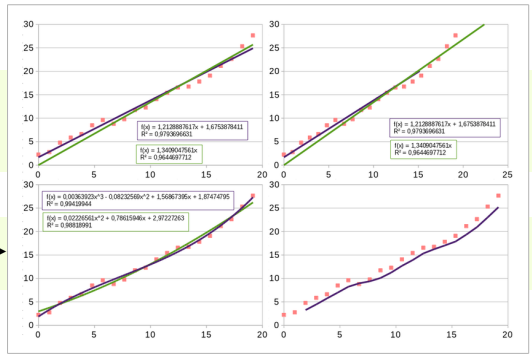
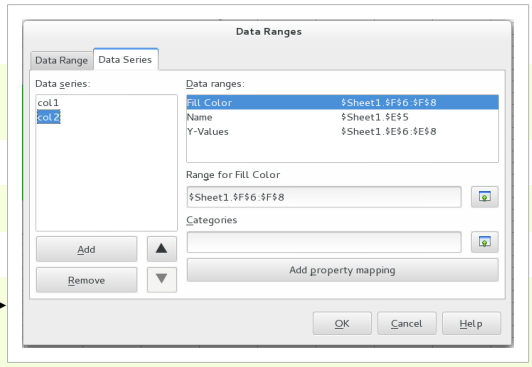
Calc

4 SPREADSHEETS (SINCE VERSION 3.4) formula, calculations & statistics	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Detailed configuration options for formula calculation. You can now configure the reference syntax for built-in function: INDIRECT. [-.- | 3.6]	-	++	▶
Multiple subtotals on a single sheet. [-.- | 3.4]	-	++	
Remove limitation of 3 sort entries. [-.- | 3.6]	-	++	
New configuration option to toggle handling of empty strings when used in arithmetic expression. [-.- | 4.0]	-	+	
Statistics functions Data ▸ Statistics (alternative to Excel's Add-in "Analysis ToolPak"). [-.- | 4.2]	-	+	
in Detailed calculation settings the user can select how textual cell content shall be treated in arithmetic operations. [-.- | 4.3]	-	+	
Extend formula range by draging from all corners. [-.- | 4.2]	-	+	▶
In Statistics Wizard Data ▸ Statistics: addition of Two factor Analysis of Variance (ANOVA). [-.- | 4.3]	-	+	
Converting formula cells into static values (via menu Tools ▸ Cell Contents ▸ Formula to Value). [-.- | 4.4]	-	+	
Added Quartile in Descriptive statistics. [-.- | 4.4]	-	+	
Added z-test. [-.- | 4.4]	-	+	
Added Chi square test. [-.- | 4.4]	-	+	

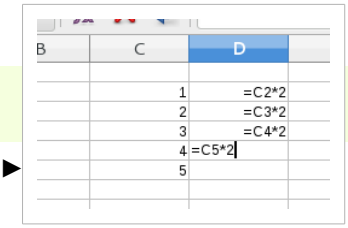




Calc

4 SPREADSHEETS (SINCE VERSION 3.4) charts	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Open and closed lines smoothed with “B-Spline” go through points interpolating between them. [-.- | 3.5]	-	+	
Adding and Removing default colors for charts from Tools->Options->Charts->Default Colors. [-.- | 3.4]	-	+	
Closed lines which are smoothed using a “Cubic Spline” are completely rounded. [-.- | 3.5]	-	+	
Support for X errorbars in scatter and bar charts, import/export to .xls and .ods when using ODF 1.2. [-.- | 3.6]	-	+	
Support color scales and data bars. Import from .xlsx and import/export from/to .ods in ODF 1.2. [-.- | 3.6]	-	+	
Automatically rotate chart axis labels if they are overlapping. Improved detection of overlap labels. [-.- | 4.0]	-	+	
Automatically Rotate Chart Axis. [3.4 | 4.0]	+	+	
Trend lines enhancement: Moving average lines. [-.- | 4.2]	-	+	
Exporting of a single chart as image (PNG, JPG). [-.- | 4.0]	-	+	
Charts export to vector graphics (e.g. SVG, PDF). [-.- | 4.1]	-	+	
Add a Stepped Lines line type to Line and XY (Scatter) charts. [-.- | 4.1]	-	+	
Toolbar buttons for vertical/horizontal grids change behavior to variate grid between major, major&minor and off. [-.- | 4.2]	-	+	
Support more than one trend line per series. [-.- | 4.2]	-	+	
Force intercept for trend lines. [-.- | 4.2]	-	+	
Extrapolation of trend lines. [-.- | 4.2]	-	+	
Polynomial trend lines. [-.- | 4.2]	-	+	
Added property mapping functionality for charts, allowing to change data series properties based on spreadsheet values. [-.- | 4.3]	-	+	

Calc

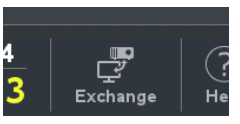
4 SPREADSHEETS (SINCE VERSION 3.4) miscellaneous	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Improvement of the drawing layer on re-positioning and re-sizing of drawing objects. [-.- | 3.4]	-	+	
Allow pasting a single cell range to multiple destination ranges. [-.- | 3.5]	-	+	
Additional data point markers, suitable for the 'standard markers' in the ODF 1.2 specification. Better mappingmarkers for charts in xls files. [-.- | 3.5]	-	+	
Remembering previous values and launches in an error message notifying link update failure. [-.- | 3.5]	-	+	
Allow starting of cell edit with the content of the cell above it as its initial content. It is bound to the Ctrl+' (single quote) key by default. [-.- | 4.3]	-	+	
"Ctrl+D" fills down in more familiar ways, with contents of the cell above if no cell is selected, and, filling down multiple cells with larger selections. [-.- | 3.6]	-	+	
Save settings Text Import Dialog for Text to Columns and Paste Unformatted Text from Clipboard. [-.- | 4.0]	-	+	
Clear Name specialties: (in parentheses the Calc en-US UI name) [in brackets the ODFF name]. [-.- | 4.1]			The following functions are handled, name specialties are given as (in parentheses the Calc en-US UI name) [in brackets the ODFF name]: ACOT, ACOTH, ARABIC, BASE, BINOM.DIST.RANGE (B) [BINOM.DIST.RANGE], BITAND, BITLSHIFT, BITOR, BITRSHIFT, BITXOR, COMBINA, COT, COTH, CSC, CSCH, DAYS, DECIMAL, FORMULATEXT (FORMULA) [FORMULA], GAMMA, GAUSS, IFNA, IMCOSH, IMCOT, IMCSC, IMCSCH, IMSEC, IMSECH, IMSINH, IMTAN, ISFORMULA, MUNIT, NUMBERVALUE, PDURATION (DURATION) [PDURATION], PERMUTATIONA, PHI, RRI, SEC, SECH, SHEET, SHEETS, SKEW.P (SKEWP) [SKEWP], UNICHAR, UNICODE, XOR
Embedding fonts in a Calc spreadsheet. [-.- | 4.1]	-	+	
Prevent increase indent from running outside a cell. [-.- | 4.2]	-	+	
Improved CRITBINOM spreadsheet function to handle large sample quantities. [-.- | 4.2]	-	+	
Enable CoinMP solver (together with lpsolve solver). [-.- | 4.3]	-	+	
In “Standard” and “Formatting” toolbars are uncommonly used commands replaced by frequent ones. [-.- | 4.4]	-	+	
Local help page button (Edit>Fill> Random Number). [-.- | 4.4]	-	+	
Local help page button for Calc in Data> Statistics. [-.- | 4.4]	-	+	
Local help entries for various functions. [-.- | 4.4]	-	+	

5. Impress and Draw

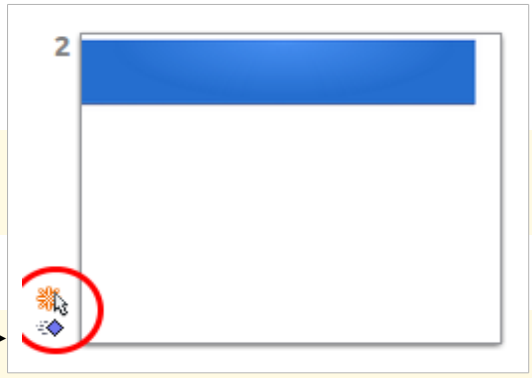
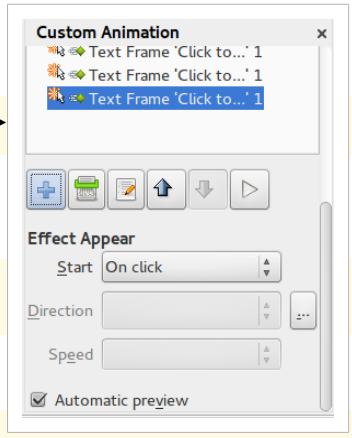
Impress / Draw

5 PRESENTATIONS AND DRAWINGS (SINCE VERSION 3.4) masterpages	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
10 new Impress master pages. [-.- | 3.6]	-	+	▶
New field: Page Title in Insert ▸ Field ▸ Page Title. [-.- | 4.4]	-	+	
In Slide Master view, the text of the presentation object previews is now read-only. To add or hide a level to the outline numbering preview, use the context menu on the last line. [-.- | 4.4]	-	+	
Toggling bullets on and off in slide master view in the outline preview via "Bullets On/Off" shows the effect in the normal view. [-.- | 3.5]	-	+	

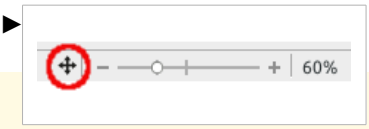
Impress / Draw

5 PRESENTATIONS AND DRAWINGS (SINCE VERSION 3.4) controlling	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Presenter Console features a "Exchange Screen Images" button to work around when the screen picks for Presenter Console instead of the speaker's laptop. [-.- | 3.5]	-	+	▶ 
More correct detecting the external display and putting the presenter console on local display. [-.- | 3.6]	-	+	
OpenGL transitions: Implemented and enabled for Windows. [-.- | 4.4]	-	+	
Improved implementation based on new OpenGL framework in vcl for Linux, Windows and OS X. [-.- | 4.4]	-	+	
Added Impress Remote for controlling the presentation. [-.- | 4.4]	-	+	

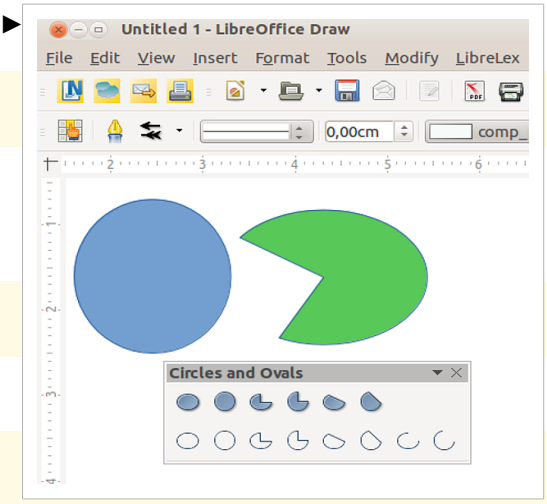
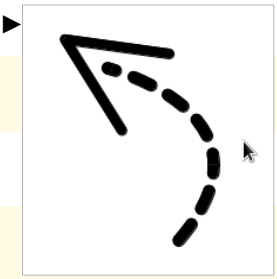
Impress / Draw

5 presentations and drawings (since version 3.4) direct view and entry	OFFICE SUITE AOO 4.1	 LO 4.4	ILLUSTRATION
Better handling of custom animation list. Just scroll to newly added animations, stay with items when they are moved up or down and keep animations in view when changing their properties. [-.- | 3.5]	-	+	
The "Insert Movie and Sound" dialog got a "Link" checkbox, enabling the embedding of media files into ODF package based documents. [-.- | 3.5]	-	+	
Start Impress without wizard (it can be run manually). [-.- | 3.5]	-	+	
Visual clue in Slide Sorter when a Slide has a Transition or Animation(s). [-.- | 4.0]	-	+	
The side bar is enabled by default. [4.0 | 4.2]	+	+	
Improve quality of page previews in Draw/Impress with supersampling. [-.- | 4.2]	-	+	
Adding icons to slides having custom animation or transition set, in presenter view, makes easier to present the whole content of the slides. [-.- | 4.2]	-	+	
New Custom Animation toolbar. [-.- | 4.2]	-	+	
Possibility to distinguish between selected and unselected slides when the mouse over highlight activates. [-.- | 4.3]	-	+	
Reorganized view menu to better unify its items similar to Writer and Calc. [-.- | 4.4]	-	+	
Default toolbars are reorganized to bring frequent used features to the toolbars. [-.- | 4.4]	-	+	
Creation of a new zoom mode button that is able to zoom in, zoom out and pan (select displayed area) with the use of Ctrl and ⇧ Shift. [-.- | 4.4]	-	+	

Impress / Draw

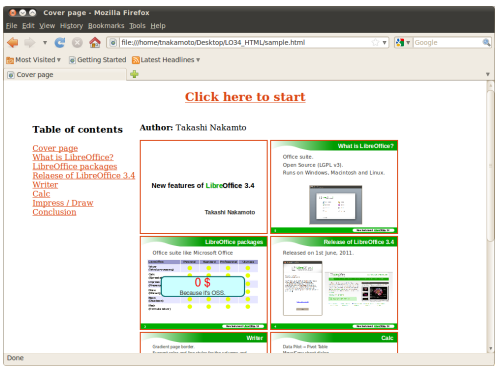
5 PRESENTATIONS AND DRAWINGS (SINCE VERSION 3.4) handi	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
The state of the sidebar pane in Impress is now remembered. [-.- | 4.0]	-	+	
Option to disable the bundled Presenter Console, for a smoother OpenLP integration. [-.- | 4.1]	-	+	
Add an icon to the statusbar to allow fitting the current slide to window with a single click. [-.- | 4.3]	-	+	▶ 
New rows/columns in tables inherit the style of the current row/column , instead of using default values. [-.- | 4.4]	-	+	
In Slide Master view elements can now be removed by direct deletion of the matching placeholder in the Master View preview. [-.- | 4.4]	-	+	

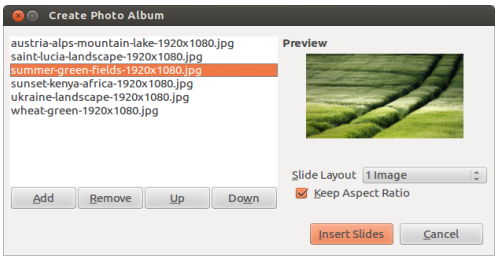
Impress / Draw

5 PRESENTATIONS AND DRAWINGS (SINCE VERSION 3.4) graphics	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Circles and Ovals toolbar from Impress now also available in Draw. [-.- | 4.0]	-	+	▶ 
Elliptical arcs in path are properly imported and rendered. [4.0 | 3.5]	+	+	
The standard palette has got some new line ends, mostly unfilled ones, useful for e.g. UML diagrams. The line width inside the marker scales together with the marker width. [-.- | 3.5]	-	+	
Shear transforms for GraphicObjects, and shear + properties for OLE Objects. [4.0 | 4.0]	+	+	
Dialog for Smooth image filter, possibility to select the radius (strength) of smoothing/blurring. [-.- | 4.0]	-	+	
Added "Edit graphics with External Tool" to Calc, Impress and Draw. [-.- | 4.0]	-	+	
Adding rounded caps (ends) to line. [3.4 | 4.0]	+	+	▶ 
Draw supports background color for text in frames and captions. [-.- | 4.4]	-	+	
Paper size specified in page formatting with printing. [-.- | 4.4]	-	+	
You can move only the point next to the rectangle in "line callout" drawings, with ⇧ Shift key pressed. [-.- | 4.4]	-	+	
Tiled rendering Wikipedia logo v3.svg for performance when navigating documents in mobile devices. [-.- | 4.4]	-	+	

Impress / Draw

5 PRESENTATIONS AND DRAWINGS (SINCE VERSION 3.4) miscellaneous	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Improve HTML export with an image thumbnail gallery of the slides on the contents page. [-.- | 3.4]	-	+	▶
Added widescreen format for Impress slideshows. [-.- | 3.6]	-	++	
Multi-image support in ODF allowing a bitmap + SVG representation eg. [4.0 | 4.0]	+	+	
Embedding fonts in a Impress presentation file. [-.- | 4.1]	-	++	
Table Style « turquise » in Impress correction. [-.- | 4.2]	-	+	
Hidden slides are no longer included in the “Number of pages” counting field, to avoid confusion. [-.- | 4.3]	-	+	
Create easy slideshows from a series of pictures with the “Photo Album” feature. [-.- | 4.1]	-	+	▶
LibreOffice supports inserting 3D models in the glTF format into presentations (using libgltf). [-.- | 4.3]	-	+	
Limited support for 3D models in *.dae and *.kmz formats (using collada2gltf). [-.- | 4.3]	-	+	
It is now possible to save an Impress/Draw file read-only and require a password to modify it. [-.- | 4.4]	-	+	

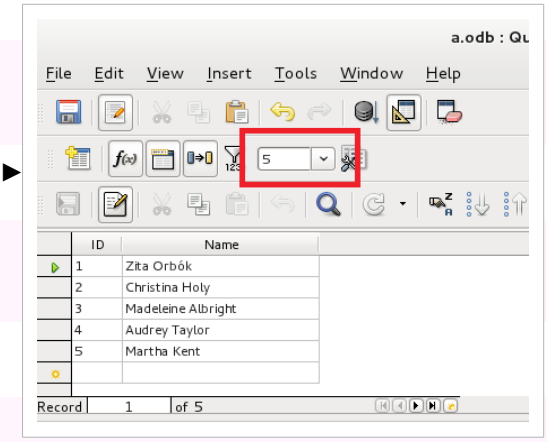




6. Base

Base

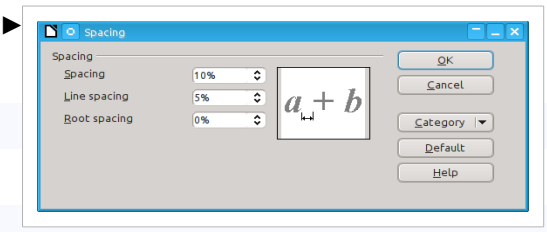
6 DATABASES, QUERIES, FORMS (SINCE VERSION 3.4) Base	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Integrated PostgreSQL native driver. It works well and much faster than alternatives such as JDBC or ODBC for basic features. [-.- | 3.5]	-	++	
Change AutoFilter in forms. Values are no longer treated as patterns. An AutoFilter on "A*" will now match only the exact value "A*". [-.- | 4.0]	-	+	
Limiting the results of a query by using the 'Limit' combobox on the Query Design Toolbar. [-.- | 4.1]	-	+	
New Query Properties Dialog in Query Design View for adding limit and distinct values properties. [-.- | 4.1]	-	+	
Query Properties Toolbar Dialog can open from Query Design Toolbar. [-.- | 4.1]	-	+	
Experimental Firebird SQL connector for LibreOffice Base. [-.- | 4.2]	-	++	
LibreOffice bundles new versions of Access2Base. [-.- | 4.3]	-	+	

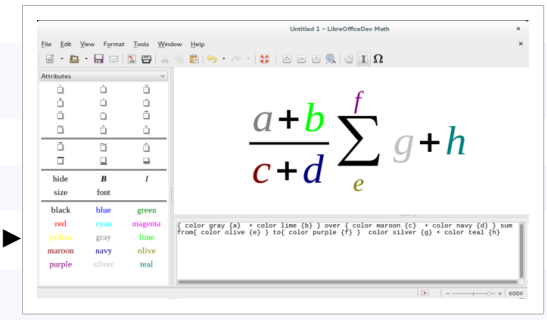


7. Math

Math

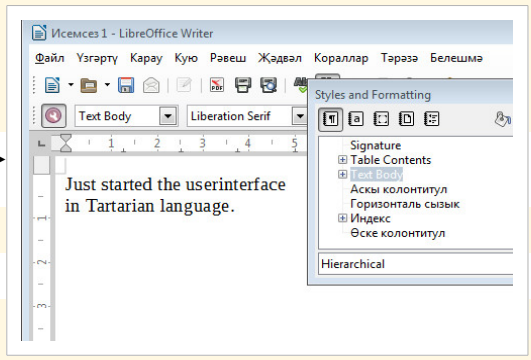
7 FORMULAS AND MATHEMATICS (SINCE VERSION 3.4) Math	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Format dialogues (Font, Font Size and Spacing) and the Symbols dialogue got a button linking to Help. [-.- | 3.6]	-	++	
New "does not exist" ∄ symbol. [-.- | 3.5]	-	+	
New symbols for Games theory. [-.- | 3.5]	-	+	
Import / export support for native RTF math expressions. [-.- | 4.0]	-	+	
New Elements docking windows added. [-.- | 4.1]	-	+	
Formula editor: Make use of ZoomSlider in Math. [-.- | 4.2]	-	+	
Formula editor: Auto Closing of brackets. [-.- | 4.2]	-	+	
Improved MathML Export. [-.- | 4.2]	-	+	
Math supports the basic 16 HTML colors. [-.- | 4.4]	-	+	
Colors can be inserted from Elements docked bar. [-.- | 4.4]	-	+	





8. Localization

localization			
8 WORLDWIDE NATIVE USE AND TOOLS (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
new languages	AOO 4.1	LO 4.4	
Portuguese (Angola) locale data (pt_AO). [-.- | 3.4]	-	+	
Arabic, Aragonese, Belarusian, Bengali, Breton, Bulgarian, Scottish Gaelic, Greek, Gujarati, Hindi, Latvian, Brazilian Portuguese, European Portuguese, Sinhala, and Telugu spelling dictionaries. [4.0 | 3.5]	+	+	
Initial support for UI languages, Luxembourgish (lb) and Tatar (tt). [-.- | 3.5]	-	+	
Added en-MW locale data. [-.- | 3.6]	-	+	
Added myv-RU locale data. [-.- | 3.6]	-	+	
Files for axk_CG beq_CG bkw_CG bvx_CG dde_CG ebo_CG iyx_CG kkw_CG kng_CG ldi_CG mdw_CG mkw_CG ngz_CG njx_CG njy_CG puu_CG sdj_CG tek_CG tsa_CG tyx_CG vif_CG xku_CG yom_CG. [-.- | 4.0]	-	+	
Beembe (beq), Bekwel(bkw), Kituba (mkw), Lari (ldi), Mbochi (mdw), Teke-Ibali (tek), Teke-Tyee (tyx), and Vili (vif) languages (Republic of Congo). With hunspell spell checker dictionaries. [-.- | 3.4]	-	+	
Added [en-GB-oed] grandfathered tag for "English, Oxford English Dictionary spelling" to language list. Northern/southern Kurdish in Latin, Syria and Arabic script. [-.- | 4.2]	-	+	
Added French (Burkina Faso) [fr-BF] and locale data. [-.- | 4.2]	-	+	
Bamanankan/Bambara_Mali [bm-ML] locale data. [-.- | 4.2]	-	+	
Puinave_Colombia [pui-CO] locale data. [-.- | 4.2]	-	+	
Arabic_UAE [ar-AE] and Arabic_Kuwait [ar-KW] locale data referrers for AED and KWD currencies. [-.- | 4.2]	-	+	
Added Maninkakan, Eastern, Latin [emk-Latn-GN]. [-.- | 4.3]	-	+	
Added Avar [av-RU]. [-.- | 4.3]	-	+	
Avaiable: Cree, Plains, Latin [crk-Latn-CN] and Syllabics [crk-Cans-CN]. [-.- | 4.3]	-	+	
Added Lengo [lgr-SB] locale data. [-.- | 4.3]	-	+	
Added Moore [mos-BF] locale data. [-.- | 4.3]	-	+	
French (Côte d'Ivoire) [fr-CI] locale data. [-.- | 4.3]	-	+	
French (Mali) [fr-ML] locale data. [-.- | 4.3]	-	+	
French (Senegal) [fr-SN] locale data. [-.- | 4.3]	-	+	
French (Benin) [fr-BJ] locale data. [-.- | 4.3]	-	+	
French (Niger) [fr-NE] locale data. [-.- | 4.3]	-	+	
French (Togo) [fr-TG] locale data. [-.- | 4.3]	-	+	

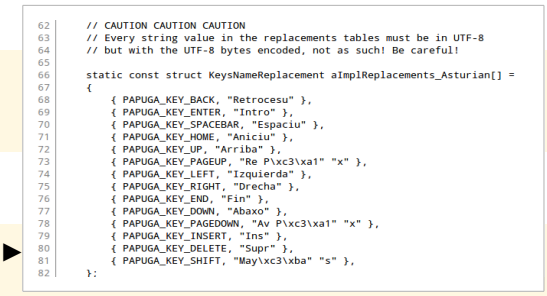


languages supported (Italovignoli.org febr. 2014), number natives:

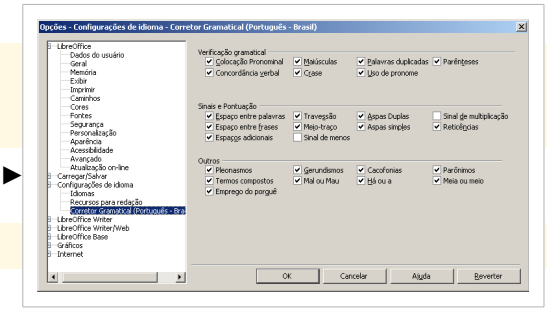
	LibreOffice	MS Office	AOO	Calligra
Afrikaans	4.740.000			
Albanian	7.436.990	7.436.990		
Amharic	21.811.560	21.811.560		
Arabic	223.010.130	223.010.130	223.010.130	
Armenian		5.924.320		
Assamese	12.828.220	12.828.220		
Asturian	110.000		110.000	
Azerbaijani		24.237.550		
Basque	657.870	657.870	657.870	
Belarusan	7.818.960	7.818.960		
Bengali	193.263.700	193.263.700		
Bodo (India)	1.333.300			
Bosnian	2.216.000	2.216.000		2.216.000
Breton	225.000			
Bulgarian	6.795.150	6.795.150	6.795.150	
Burmese	32.035.300			
Catalan	7.220.420	7.220.420	7.220.420	7.220.420
Chinese	1.197.392.400	1.197.392.400	1.197.392.400	1.197.392.400
Croatian	5.533.890	5.533.890	5.533.890	
Czech	9.469.340	9.469.340	9.469.340	9.469.340

localization

8 WORLDWIDE NATIVE USE AND TOOLS (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
spell and grammar	AOO 4.1	LO 4.4	
Updated German spell check dictionaries, hyphenation and thesaurus. [3.4 | 3.4]	+	+	
Duden Korrektor extension 5.0 and 6.0 added. [3.4 | 3.5]	+	+	
Possessive genitive case and/or partitive month names if provided by a locale's locale data. [-.- | 3.5]	-	+	
Corrections to Polish [pl-PL], Portuguese [pt-PT and pt-BR], Slovenian [sl-SI], and Latin [la-VA] locale data, esp. date formats. [-.- | 3.5]	-	+	
Bundled LightProof grammar checkers for English, Hungarian, and Russian. [-.- | 3.5]	-	+	
Checks: punctuation, a/an article, word spacing, paragraph capitalization, simple word duplication etc.. [-.- | 3.5]	-	+	
Longer explanations, using Wikipedia articles. [-.- | 3.5]	-	+	
Translated key names on Windows for Asturian, Catalan, Estonian, Slovenian and Spanish. Translated key names on Linux for Slovenian. [-.- | 4.0]	-	+	
Optional: more grammar checks, measurement conversion, thousand separation, sentence capitalization; n-dash/m-dash, quotation mark and parenthesis checks... [-.- | 3.5]	-	+	
English grammar checker: in Tools » Extension manager click on extension, and its Options button. [-.- | 3.5]	-	+	
New gy, gj, gf, etc. Italic ligatures for Hungarian and new font features for ligature handling (ligc, lith, litt). [-.- | 3.5]	-	+	
Better typography of Catalan. [-.- | 3.5]	-	+	
Updated pt-BR spellchecker. [-.- | 3.6]	-	+	
LightProof grammar checker for Brazilian Portuguese pt-BR available. Improvements in spell checking. [-.- | 4.0]	-	+	
More checking rules pt-BR LightProof grammar checker. [-.- | 4.1]	-	+	
Updated Swedish spell-check dictionary. [-.- | 3.6]	-	+	
Updated French spell-check dictionary / thesaurus. [-.- | 3.6]	-	+	
Updated Czech thesaurus. [-.- | 3.6]	-	+	
Improved German language tools with over 30,000 new words added to dictionary, and new symbols to the thesaurus. Better hyphenation patterns. [-.- | 3.6]	-	+	
Improvements Danish spellchecker and thesaurus. [-.- | 3.6]	-	+	
Autocorrection improvements for pt-BR. [-.- | 4.0]	-	+	
Updated Slovenian thesaurus. [-.- | 4.0]	-	+	



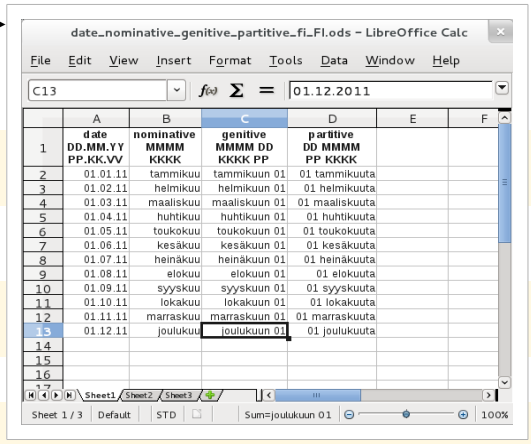
```
// CAUTION CAUTION CAUTION
// Every string value in the replacements tables must be in UTF-8
// but with the UTF-8 bytes encoded, not as such! Be careful!

static const struct KeysNameReplacement aImplReplacements_Asturian[] =
{
    { PAPUGA_KEY_BACK, "Retrocesu" },
    { PAPUGA_KEY_ENTER, "Intro" },
    { PAPUGA_KEY_SPACEBAR, "Espaciu" },
    { PAPUGA_KEY_HOME, "Aniciu" },
    { PAPUGA_KEY_UP, "Arriba" },
    { PAPUGA_KEY_PAGEUP, "Re P\xc3\xa1" "x" },
    { PAPUGA_KEY_LEFT, "Izquierda" },
    { PAPUGA_KEY_RIGHT, "Drecha" },
    { PAPUGA_KEY_END, "Fin" },
    { PAPUGA_KEY_DOWN, "Abaxo" },
    { PAPUGA_KEY_PAGEDOWN, "Av P\xc3\xa1" "x" },
    { PAPUGA_KEY_INSERT, "Ins" },
    { PAPUGA_KEY_DELETE, "Supr" },
    { PAPUGA_KEY_SHIFT, "May\xc3\xba" "s" },
};
```



The legacy kludge for Catalan Valencian UI translation [ca-XV] got proper [ca-ES-valencia] tag. [-.- | 4.2]	-	+
Legacy kludge [sh-*] locales made proper [sr-Latn-*] with support of [sh-*] for existing documents. [-.- | 4.2]	-	+
Added Ladin_Italy [lld-IT] locale data for full locale support. [-.- | 4.2]	-	+
Improved language tools German (de-AT, de-CH, de-DE). Over 10,000 words added to spell-check dictionary, updated hyphenation patterns. [4.0 | 4.2]	+	+
Lao (lo_LA) spell-check dictionary added. [-.- | 4.2]	-	+
Brazilian Portuguese (pt_BR) spell-check dictionary updated. [-.- | 4.2]	-	+
Spanish spell-check dictionary updated. [-.- | 4.2]	-	+
Swedish spell-check dictionary updated. [-.- | 4.2]	-	+
French spell-check dictionary updated. [4.0 | 4.2]	+	+
Dutch spell-check dictionary updated. [-.- | 4.2]	-	+
Scottish Gaelic (gd_GB) spell-check dictionary updated. [4.0 | 4.2]	+	+
Slovenian thesaurus updated. [-.- | 4.2]	-	+
Latvia adoption of the Euro. 'EUR' currency to [lv-LV] and [ltg-LV] locale data and made default currency. Added 'LVL' Latvian Lats to the Euro Converters. [-.- | 4.2]	-	+
Estonian Kroon "EEK" conversion to the Calc EUROCONVERT() spreadsheet function. [4.0 | 4.2]	+	+
Catalan Valencian [ca-ES-valencia] locale data. [-.- | 4.4]	-	+
Portuguese spell-check dictionary update. [-.- | 4.4]	-	+
New French spell-check dictionary update. [-.- | 4.4]	-	+
New Slovenian thesaurus update. [-.- | 4.4]	-	+

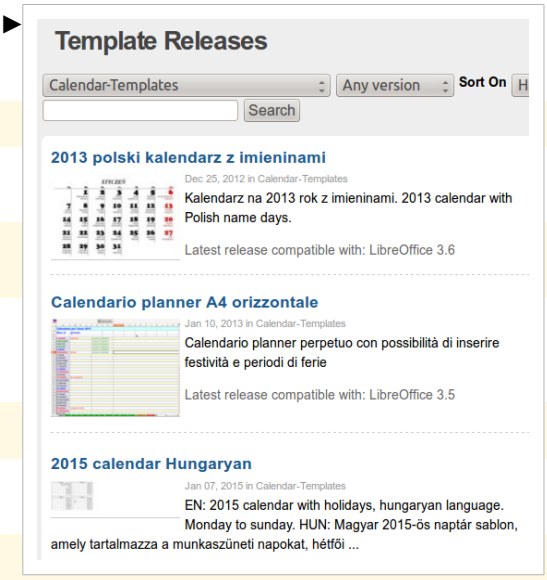
localization

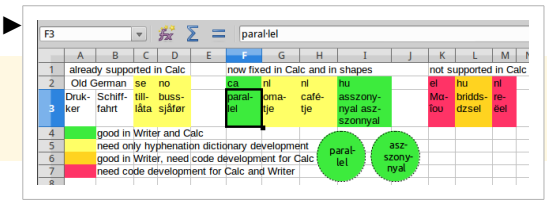
8 WORLDWIDE NATIVE USE AND TOOLS (SINCE VERSION 3.4) dates and numbers	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
If a day of month (D or DD) is present in a number formatter's date format code, the month will be displayed in possessive genitive or partitive case. [-.- | 3.5]	-	+	▶
Greek Characters mode for bullets and numbering. [-.- | 3.4]	-	+	
Autotext "Formula numbering" (fn+F3) has been corrected for most locales. [3.4 | 3.5]	+	+	
Implemented locale dependent date acceptance patterns for input of incomplete dates. [-.- | 3.6]	-	+	
New numbering types. [-.- | 3.5]	-	+	
Persian words: [-.- | 3.5] یک، دو، سه ...	-	+	
Arabic abjad letter squence: [-.- | 3.5] ا، ب، ج ...	-	+	

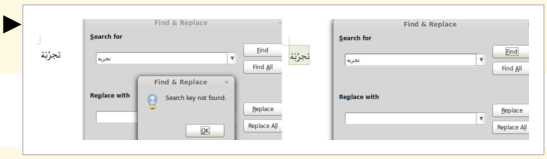


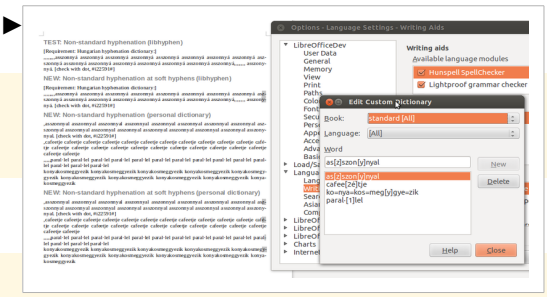
localization

8 WORLDWIDE NATIVE USE AND TOOLS (SINCE VERSION 3.4) language tools	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Template repositories with many languages, see templates.services.openoffice.org / templates.libre-office.org. [4.0 | 4.0]	+	+	▶
Grammar check + Lightproof editor toolbar. [-.- | 3.5]	-	+	
Run-time compilation and update of grammar checking component. [-.- | 3.5]	-	+	
Improved spellchecker, thesaurus and hyphenation patterns. [-.- | 3.6]	-	+	
When choosing the locale in language options, the locale indicated as default is default of the operating system. [-.- | 3.6]	-	+	
Idxexample.odt localizable via PO files. [-.- | 4.0]	-	+	
agenda/fax/letter/report templates are localizable. [-.- | 4.0]	-	+	
Support font localized forms (locl) in Writer. [-.- | 4.1]	-	+	
Improved hyphenation in Calc and Draw. [-.- | 4.1]	-	+	▶
Optional URL to more error-details SingleProofreadingError::aProperties. The property needs to be named FullCommentURL. A popup starts. [-.- | 3.5]	-	+	
Shipping Adobe's Source Sans Pro 2.0, including an expanded range of characters. Support of Cyrillic, Greek and IPA writing systems. [-.- | 4.3]	-	+	
Support ignoring diacritics Right-to-left languages. [-.- | 4.2]	-	+	▶
Fix comment toggle button position in case of Right-to-left locale set to Right-to-left language. [-.- | 4.2]	-	+	
Non-standard hyphenation, and (soft hyphen based) dialog window suggesting hyphenation. [-.- | 4.3]	-	+	
New method to specify character changes before the hyphenation break sometimes needed. [-.- | 4.3]	-	+	▶
Complete hyphenation of Dutch, Norwegian, Swedish, Catalan, Hungarian without the modification of the TeX-like hyphenation patterns. [-.- | 4.3]	-	+	
Ability to translate gallery files using a .desktop file syntax '.str' file placed next to the gallery. [-.- | 4.1]	-	+	
Support for BCP 47 language tags. Reading and writing ODF 1.2 fo:script and *:rfc-language-tag attributes. Reading / writing tags from/to OOXML. [-.- | 4.2]	-	+	
TeX-like input Unicode subscript/superscript characters: cm^2 → cm², H_2O → H_2O, H^+ → H^+. [4.1 | 4.4]	+	+	
Russian proof-reading rules updated. [-.- | 4.4]	-	+	
Spanish AutoCorrect patterns and typographical rules. [-.- | 4.4]	-	+	



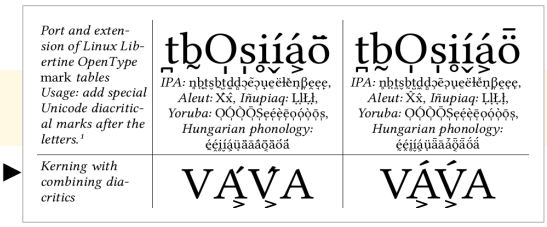






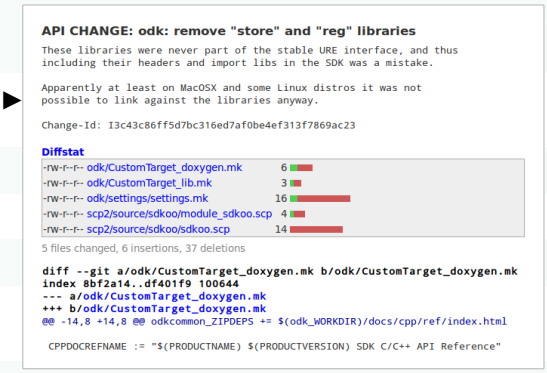
localization

8 WORLDWIDE NATIVE USE AND TOOLS (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
miscellaneous	AOO 4.1	LO 4.4	
Reworked the grammar checking dialog to better show the error help. [-.- | 3.5]	-	+	
New typographic features by improved Graphite port. [-.- | 3.5]	-	+	
Release of Libertine Open Fonts, see: NEWS.pdf and NEWS.odt, fontfeatures.pdf and fontfeatures.odt. [-.- | 3.5]	-	+	
Improved windows input method alignment using IMR_QUERYCHARPOSITION. [-.- | 4.1]	-	+	
Catalan Valencian [ca-ES-valencia] is supported as language for document content. [-.- | 4.2]	-	+	
Character attribution / spell-checking, added to list: Ngäbere_Panama [gym-PA], Kumyk [kum-RU], Nogai [nog-RU], Karakalpak Latin [kaa-Latn-UZ], Ladin [lld-IT], Puinave [pui-CO]. [-.- | 4.2]	-	+	



9. Basement

basement			
9 API CHANGES, INTERFACE, CODE (SINCE VERSION 3.4)	OFFICE SUITE		ILLUSTRATION
API changes	AOO 4.1	LO 4.4	
C++ UNO Language Binding and URE Libraries. [-.- | 4.0]	-	+	
C++ UNO again Language Binding and URE Libraries. [-.- | 4.1]	-	+	
Headers for store and reg libraries were removed from the SDK. [-.- | 4.1]	-	+	
Changes to Unpublished UNO API's. [-.- | 4.1]	-	+	
macro SAL_PRGEXTENSION removed. [-.- | 4.2]	-	+	
stricter requirements cppuhelper/shlib.hxx. [-.- | 4.2]	-	+	
unused cppu::invokeStaticComponentFactory removed. [-.- | 4.2]	-	+	
CPLD_ACCESS removed from C++/Java loaders. [-.- | 3.6]	-	+	
osl_getEthernetAddress and osl/util.h removed. [-.- | 4.2]	-	+	
the macro EXCEPTIONS_OFF removed. [-.- | 4.2]	-	+	
SDK no longer has the autodoc documentation tool. [-.- | 4.2]	-	+	
Obsolete --java4 command line parameter removed. [-.- | 4.2]	-	+	
Added 64-bit builds for OS X. [-.- | 4.2]	-	+	
Experimental API allows (initially) LibreOffice's filters to be re-used by directly linking to the LibreOffice core, via a very tiny static library / shim). [-.- | 4.2]	-	+	
Symbols & source server LibreOffice on Windows. Makes it easy to get a backtrace. [-.- | 4.2]	-	+	
UNO services are converted to new-style services. [-.- | 4.2]	-	+	



API CHANGE: odk: remove "store" and "reg" libraries

These libraries were never part of the stable URE interface, and thus including their headers and import libs in the SDK was a mistake.

Apparently at least on MacOSX and some Linux distros it was not possible to link against the libraries anyway.

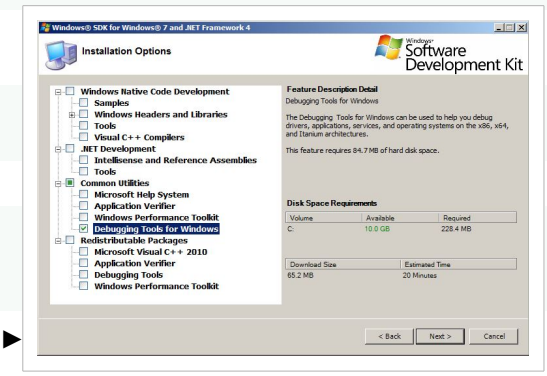
Change-Id: I3c43c86ff5d7bc316ed7af0be4ef313f7869ac23

Diffstat

-rw-r--r-- odk/CustomTarget_doxygen.mk 6
-rw-r--r-- odk/CustomTarget_lib.mk 3
-rw-r--r-- odk/settings/settings.mk 16
-rw-r--r-- scp2/source/sdkoo/module_sdkoo.scp 4
-rw-r--r-- scp2/source/sdkoo/sdkoo.scp 14

5 files changed, 6 insertions, 37 deletions

```
diff --git a/odk/CustomTarget_doxygen.mk b/odk/CustomTarget_doxygen.mk
index 8bf2a14..df401f9 100644
--- a/odk/CustomTarget_doxygen.mk
+++ b/odk/CustomTarget_doxygen.mk
@@ -14,8 +14,8 @@ odkcommon_ZIPDEPS += $(odk_WORKDIR)/docs/cpp/ref/index.html

 CPPDOCREFNAME := "$(PRODUCTNAME) $(PRODUCTVERSION) SDK C/C++ API Reference"
```



basement

9 API changes, interface, code (since version 3.4) removal / deprecation	OFFICE SUITE AOO 4.1	 LO 4.4	ILLUSTRATION
Dropped support for legacy binary StarOffice files. [4.0 | 4.0]	+	+	
Dropped support for export Word/Excel (6.0/95) files. [-.- | 4.0]	-	+	
Dropped support for ODMA document management integration. [-.- | 4.0]	-	+	
Dropped legacy STLport library. [-.- | 4.0]	-	+	
Deprecated Mac / PPC as a platform, raising our base-line to 10.6. [-.- | 4.0]	-	+	
Dropped support of Windows 2000. [4.0 | 4.0]	+	+	
Support Mac OS X for PowerPC has been dropped. [-.- | 4.0]	-	+	
Support for Mac OS X's SDK v10.4 and 10.5 dropped. [-.- | 4.0]	-	+	
Removing deprecated configuration options. [-.- | 4.0]	-	+	
Modules install option removed for Windows. [-.- | 4.0]	-	+	
Exporting to OpenOffice.org 1.0 XML removed; users are recommended to save in ODF. [-.- | 4.0]	-	+	
"Insert Shapes" panel Sidebar in Draw dropped. [-.- | 4.0]	-	+	
Removed: embedding LibreOffice in certain web browsers via Wikipedia logo v3.svg. [-.- | 4.0]	-	+	
Text layout on Linux has been ported to HarfBuzz. [-.- | 4.0]	-	+	
Removal UNO API (com.sun.star). [4.0 | 4.0]	+	+	

Remove Mac OS X 10.4 and 10.5 SDK support

Change-Id: Ib47f75f115f3410299890e775784b7c7bbc1316c

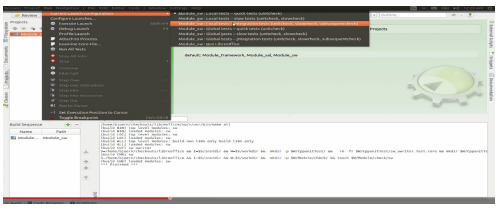
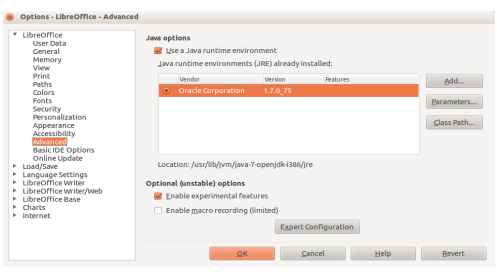
Diffstat

-rw-r--r-- configure.ac 150

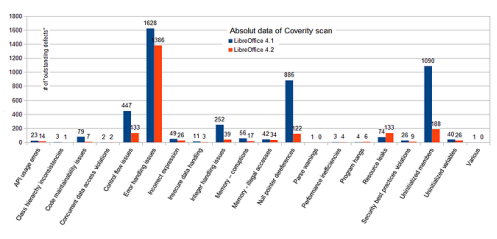
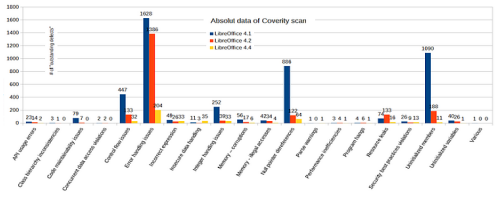
1 files changed, 26 insertions, 124 deletions

```
diff --git a/configure.ac b/configure.ac
index cc24bf0..abd069d 100644
--- a/configure.ac
+++ b/configure.ac
@@ -2370,9 +2370,9 @@ if test "$_os" = "Darwin"; then
     # The intent is that for "most" Mac-based developers, a suitable
     # SDK will be found automatically without any configure options.

-    # For developers still using Xcode 2 or 3, in /Developer, either
+    # For developers still using Xcode 3, in /Developer, either
     # because it is the only Xcode they have, or they have that in
-    # addition to Xcode 4 in /Applications/Xcode.app, the 10.4 SDK
+    # addition to Xcode 4 in /Applications/Xcode.app, the 10.6 SDK
     # should be found.

     # For developers with a current Xcode 4 installed from the Mac App
@@ -2381,13 +2381,11 @@ if test "$_os" = "Darwin"; then
```

basement

9 API CHANGES, INTERFACE, CODE (SINCE VERSION 3.4) infrastructure	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Updated build environment Windows Server 2012R2 with Visual Studio 2012). [-.- | 4.3]	-	+	
Integration with IDE kdevelop, Microsoft Visual Studio, Vim. [-.- | 4.3]	-	+	▶ 
Mac OSX 32 bits build (10.6 and 10.7 deprecated). [-.- | 4.3]	-	+	
LibreOffice 4.4 OS X 10.8 or later. The binary packages provided are 64-bit only. [-.- | 4.4]	-	+	
LibreOffice will accept using a Java that is a symlink. [-.- | 3.5]	-	+	
Support Java 7. User can select between Java 6 or 7. [-.- | 3.5]	-	+	▶ 
Java and advanced options combined. [-.- | 4.0]	-	+	
Use of the new Berkeley DB installed on the system. [-.- | 3.5]	-	+	
Check for Updates automatically at user defined intervals, allows manual download of new version. [4.0 | 3.5]	+	++	
User profile path on Linux now ~/.config/libreoffice. [-.- | 3.5]	-	+	

basement

9 API CHANGES, INTERFACE, CODE (SINCE VERSION 3.4) code quality	OFFICE SUITE AOO 4.1	OFFICE SUITE LO 4.4	ILLUSTRATION
Dead code removal reducing code size & bloat. [-.- | 3.5]	-	+	
Improved code quality based on the Coverity scan analysis. [4.1 | 4.2]	+	+	▶ 
SOLAR_USER_RTL_TEXTENCODING environment: Support ndocumented variable removed. [-.- | 4.2]	-	+	
Major refactoring and cleanup of CL code. [-.- | 4.3]	-	+	
Translation of source code comments into English. [-.- | 4.4]	-	+	
Further improved code quality based on the Coverity scan analysis. [-.- | 4.4]	-	++	▶