



LibreOffice
The Document Foundation



Lightning talks

TIRANA | Sept. 28th, 2018



LIBOCON
TIRANA 2018



Speakers

- Lázsló: LibreOffice and eTwinning
- Caolan: oss-fuzz, crash testing & coverity
- Muhammet: Customize dialog news
- Thorsten: Why is doing dev metrics hard
- Moggi: UI testing in LibreOffice
- Guilhem: the status.documentfoundation.org website
- Cathy: documentation & LibreOffice
- Gabor: a brief look at chart bugfixing
- Armin: system-dependent data buffering
- Gabriele: TBD
- Franklin: What "Designing with LibreOffice" taught me
- Mark: Vertical Ruby Support in LibreOffice
- Miklos: vcl layout speedup

Coverity, Crashtesting and Fuzzing

- Coverity Stats
- Crashtesting Stats
- OSS-Fuzz Stats

Coverity Stats 2017

Oct 05, 2017

Last Analyzed

6,309,197

Lines of Code Analyzed

6,275,320

Lines of Code in Selected
Components

0.00

Defect Density

Defect changes since previous build dated Sep 30, 2017

8

Newly detected

6

Eliminated

Defects by status for current build

25,046

Total defects

12

Outstanding

338

Dismissed

24,696

Fixed

Coverity Stats 2018

Sep 22, 2018

Last Analyzed

6,444,225

Lines of Code Analyzed

6,424,737

Lines of Code in Selected
Components

0.00

Defect Density

Defect changes since previous build dated Sep 21, 2018

0

Newly detected

2

Eliminated

Defects by status for current build

25,430

Total defects

5

Outstanding

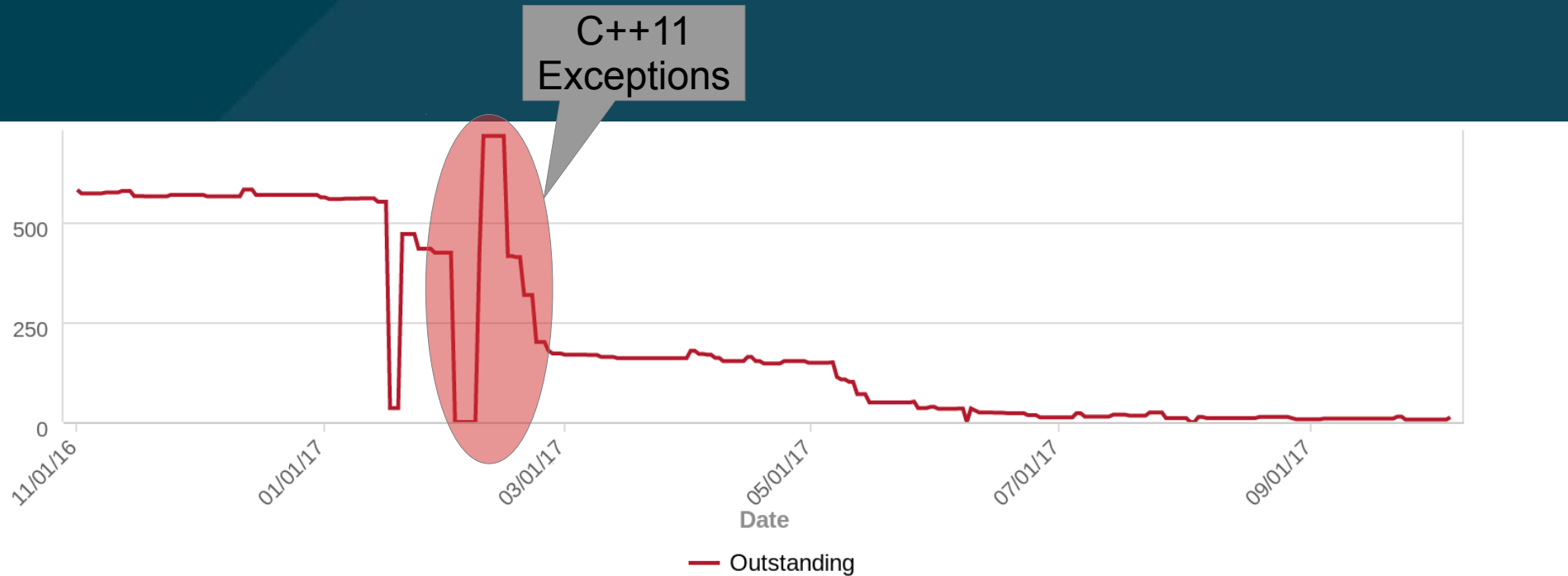
349

Dismissed

25,076

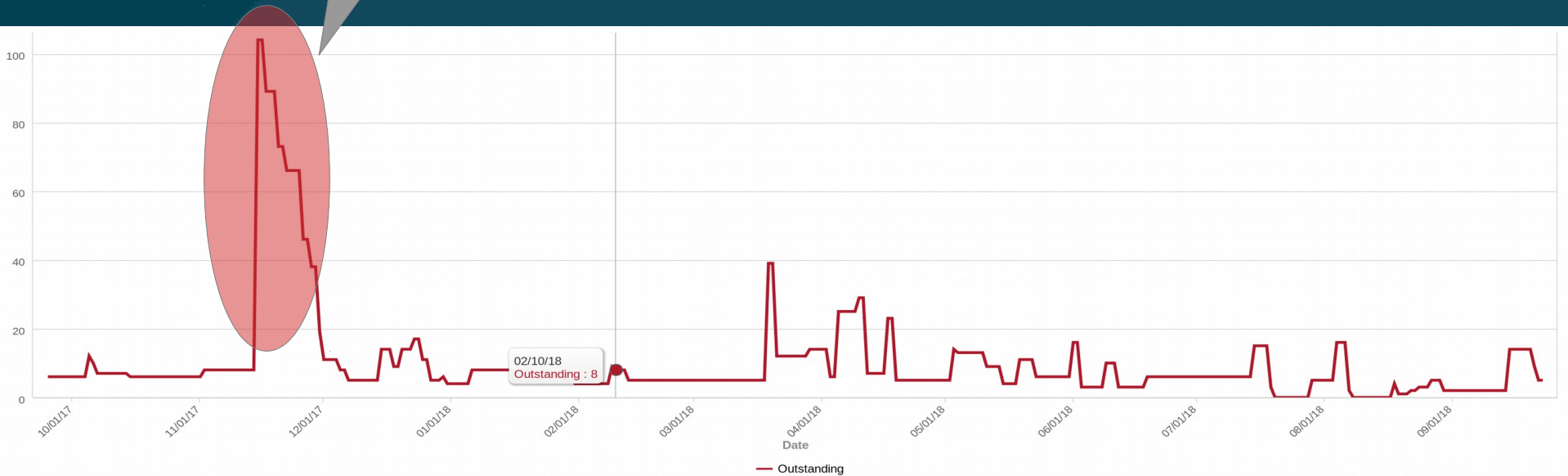
Fixed

Coverity Stats 2017



Coverity Stats 2018

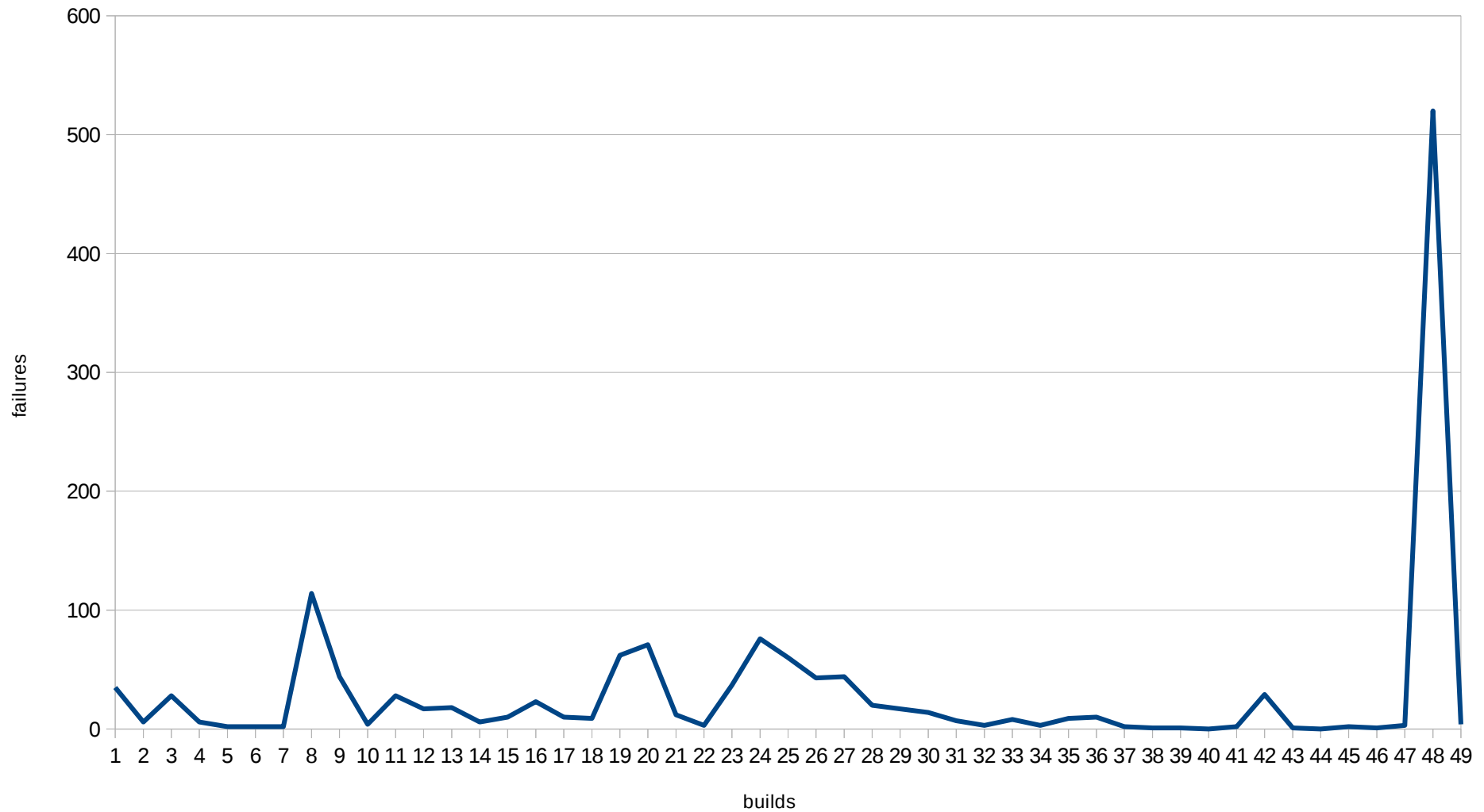
C++17
Syntax



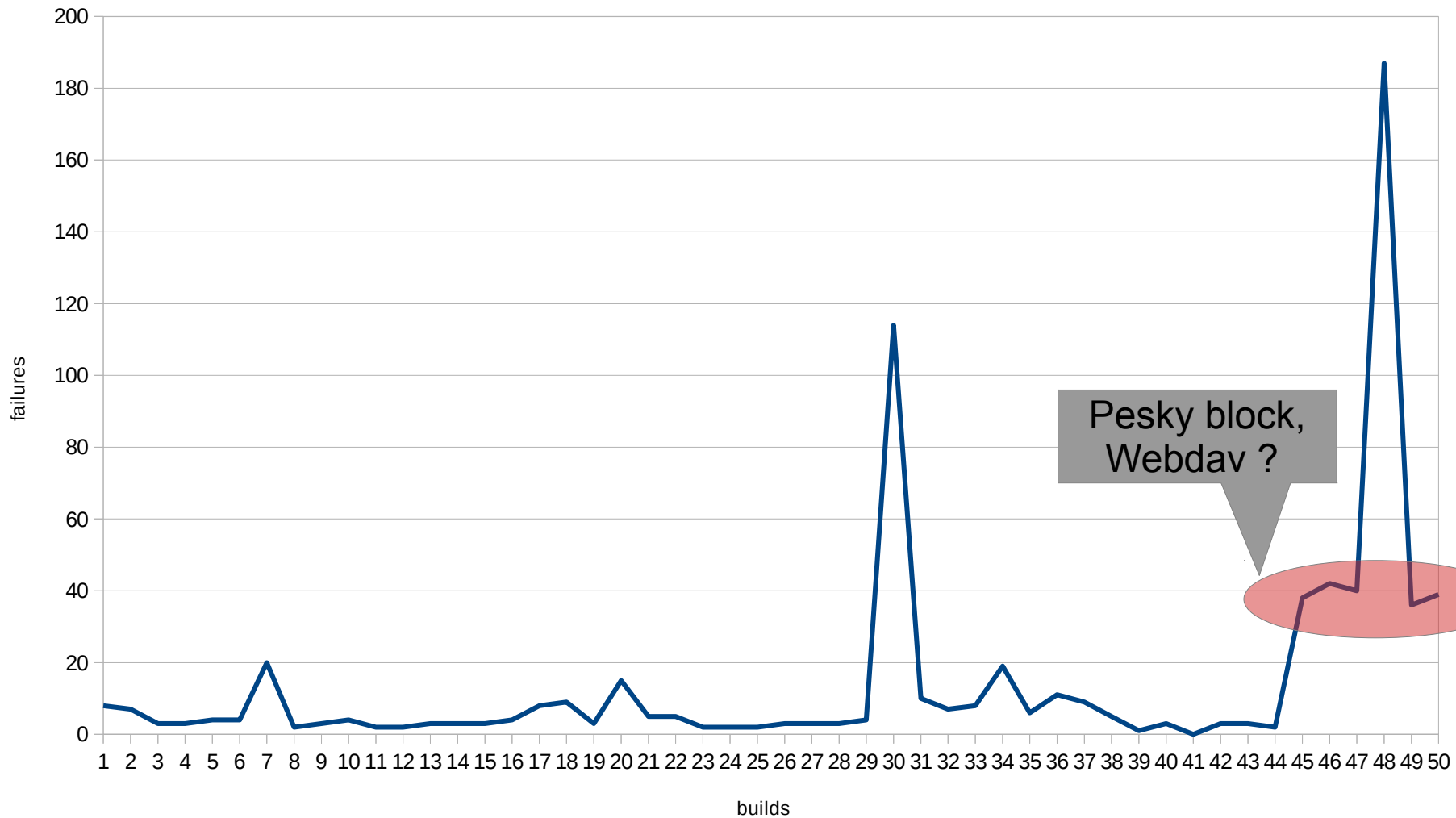
CrashTesting

- 108480 (up from 98531) documents

CrashTesting Import



CrashTesting Export



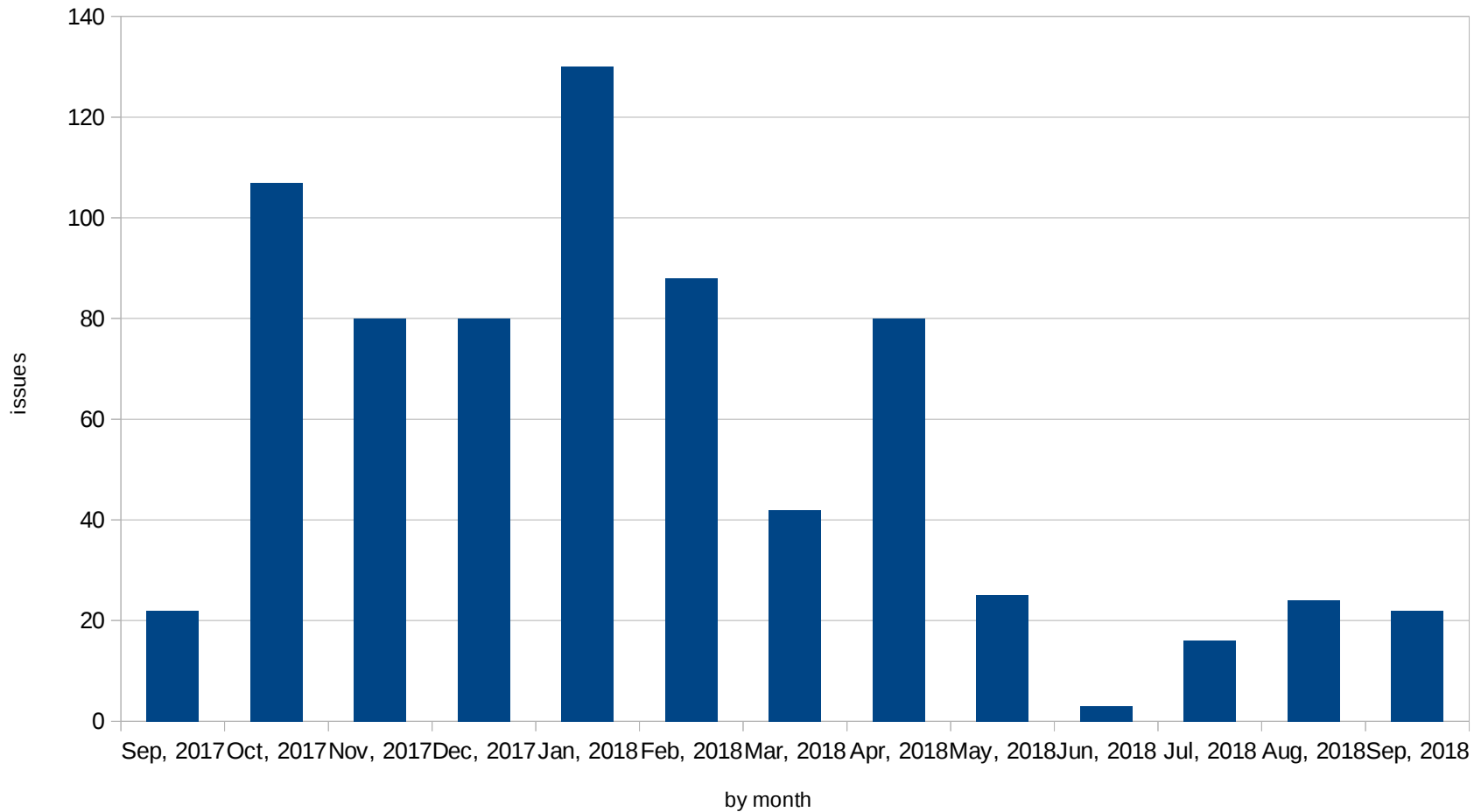
Google OSS-Fuzz



Our current status

- libfuzzer+asan, libfuzzer+ubsan, and afl+asan
 - Just libfuzzer+asan last year
- 45 fuzzer (up from 34 fuzzers)

A year of oss-fuzz



719 bugs, of which 149 serious

End



LibreOffice
The Document Foundation



Customize Dialog

Muhammet Kara

muhammet.kara@pardus.org.tr

TIRANA | 28 Sept. 2018





Agenda

- Goals
- Current State
- Since Last Year
- What's Left



Goals

- Modernize to...
 - ...make it more usable
 - ...make it fully accessible
 - ...make it intuitive
 - ...eliminate bugs



Current State

- Finished tabs:
 - Menus
 - Toolbars
 - Context Menus
- Search feature in the keyboard tab
- Some annoying bugs fixed

Customize

Menus Toolbars Context Menus Keyboard Events

Search
Type to search

Category
All commands

Function

- 100%
- 150%
- 200%
- 3D Color
- 50%
- 75%
- About LibreOfficeDev
- Absolute Record
- Accept
- Accept All
- Activation Order
- Add Field
- Add Text Box
- Address Book Source

Description
Displays the document at its actual size.

Scope
LibreOfficeDev Writer

Target
File

Function

- New
- Open...
- Open Remote...
- Recent Documents
- Close
- Wizards
- Templates
- Reload
- Versions...
- Save
- Save Remote...

Customize

Insert Modify Defaults

Help OK Cancel Reset



Since Last Year

- Some fixed bugs & added features
 - tdf#108916: uno:LanguageStatus shouldn't appear in the customize dialog
 - tdf#112207: Allow assigning styles to ui elements
 - tdf#112207: Allow assigning macros to ui elements
 - tdf#114260: Add gear button to Customize dialog
 - tdf#114260: Allow moving top-level menus
 - tdf#115511: Make the description field keyboard-accessible
 - tdf#116494: Don't ask parent if no help text
 - tdf#114260: Allow setting toolbar style in the gear menu
 - tdf#112323: Sort the category list alphabetically in the Customize dialog
 - Add UI test for the Customize dialog



TODO

- Revamp the remaining tabs
 - Keyboard
 - Events
- Fix existing bugs on the meta bug
- Tdf#103238 – Customize Dialog Meta Bug

Depends on: [36976](#) [Customize-Dialog-Keyboar](#) [61210](#) [73463](#) [79188](#) [101513](#) [103240](#) [106846](#) [107279](#) [107281](#) [108458](#) [112135](#) [112237](#) [112369](#) [112614](#) [112615](#) [112620](#) [112651](#) [112831](#) [113527](#) [113828](#) [114264](#) [114557](#) [116491](#) [117621](#) [52331](#) [56811](#) [63966](#) [82840](#) [88896](#) [96705](#) [99493](#) [103160](#) [103464](#) [103491](#) [106681](#) [106784](#) [107852](#) [107853](#) [107854](#) [107855](#) [107933](#) [108011](#) [108449](#) [108916](#)

Thank you!



All text and image content in this document is licensed under the Creative Commons Attribution-Share Alike 4.0 License (unless otherwise specified). “LibreOffice” and “The Document Foundation” are registered trademarks. Their respective logos and icons are subject to international copyright laws. The use of these thereof is subject to trademark policy.



WHY IS DOING SOFTWARE DEVELOPMENT METRICS HARD?

THORSTEN BEHRENS
LIBREOFFICE CONFERENCE TIRANA



Programmer Wisdom

“ When you can measure what you are speaking about, and express it in numbers, you know something about it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely, in your thoughts ”
advanced to the stage of science

Lord Kelvin

Programmer Wisdom

“ In truth, a good case could be made that if your knowledge is meagre and unsatisfactory, the last thing in the world you should do is to make measurements. The chance is negligible that you will measure the right thing accidentally. ”

George Miller

Some advice (from others)

- Track meaningful work
 - Track trends, not numbers
 - Use metrics that lead to positive change
 - Avoid code churn
 - MTBF, MTTR
 - Award good behaviour: bugfixing, mentoring, reviews
-



Agenda

Markus Mohrhard

UI testing in LibreOffice



UI testing in LibreOffice

- ▼ Markus Mohrhard
- ▼ 2018-09-28

- make uicheck
- Can execute single test manually
- <https://cgit.freedesktop.org/libreoffice/contrib/dev-tools/tree/uitest/execute.sh>
- <https://wiki.documentfoundation.org/Development/UITests>

Logging and replaying

- Set `LO_COLLECT_UIINFO=test.log`
- Log file generated under `instdir/uitest/test.log`
- `uitest/loginterpreter.py instdir/uitest/test.log`
`simple_test.py`
- Work by Saurav Chirania as part of GSoC



Thank you ...

▼ ... for listening!



[Creative Commons Attribution-Share Alike 3.0 License](#)
and their respective logos
[are trademarks of their respective owners.](#)
[Please see our trademark policy](#)



Agenda

Guilhem Moulin:

<https://status.documentfoundation.org>



Agenda

Cathy Crumbley

Documentation & LibreOffice

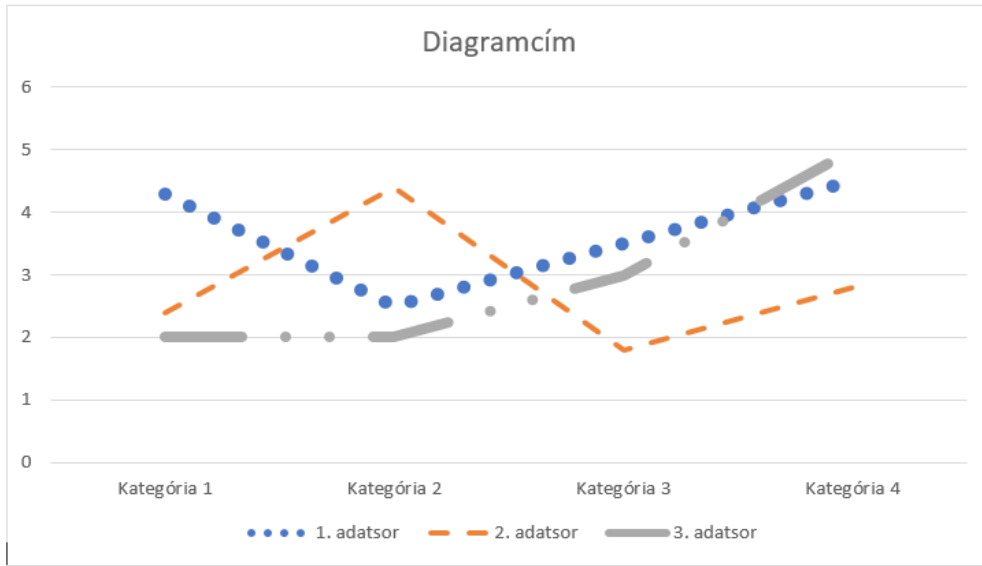
LibreOffice bug fixing

in ooxml import/export of charts

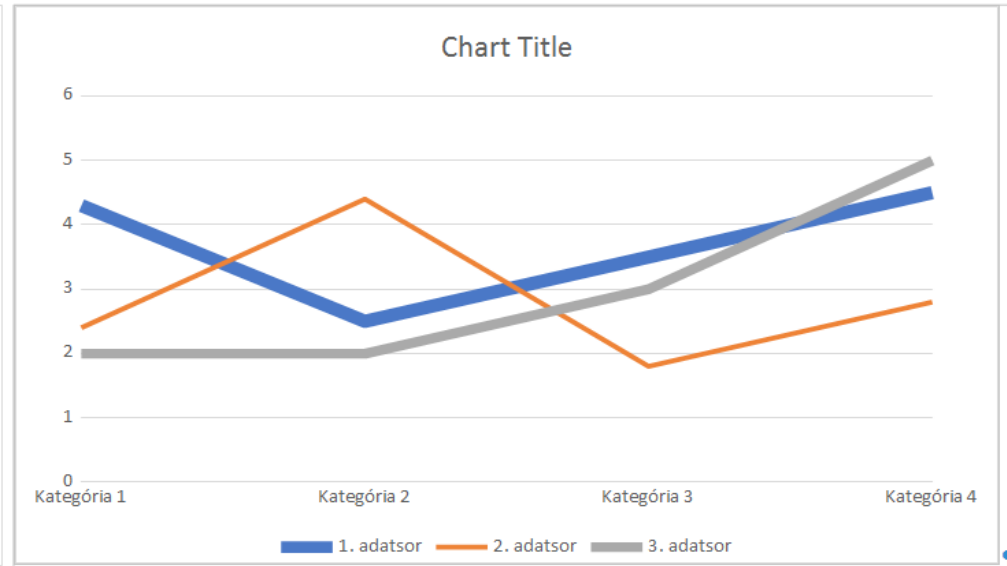
Ádám Kovács and Balázs Varga

Junior developers

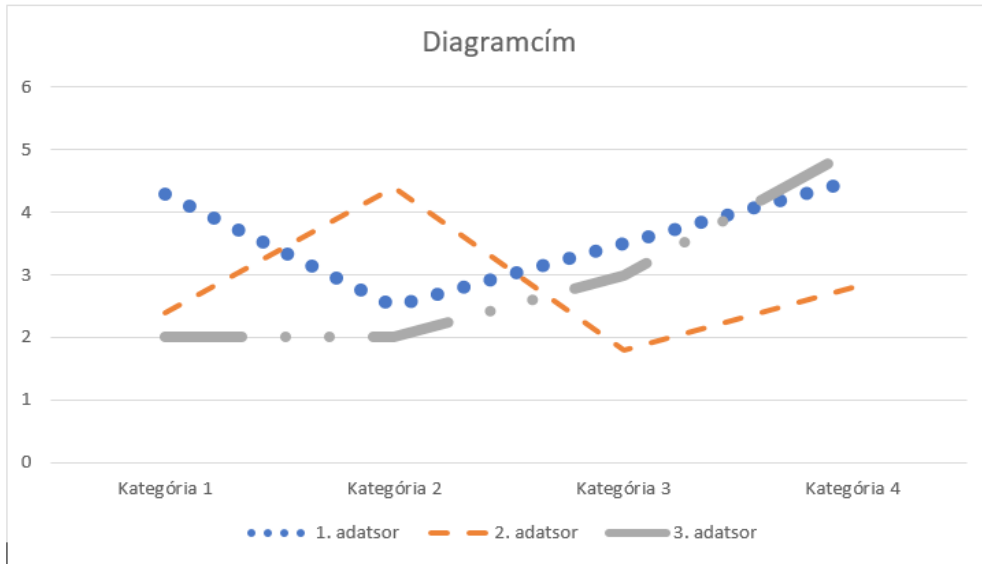
NISZ Inc.



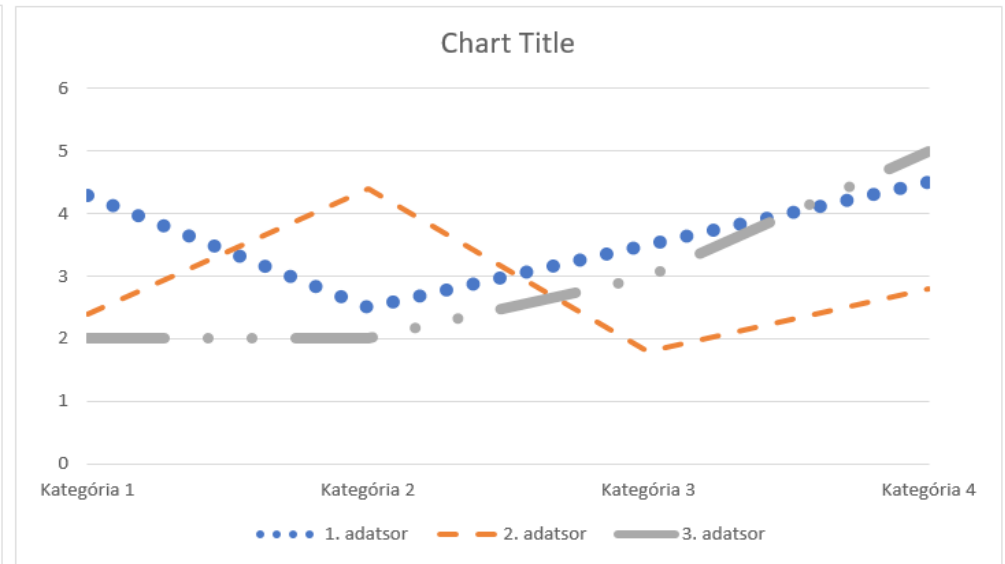
the original file



after saving the file with LO to docx, xlsx



the original file



after saving the file with LO to docx, xlsx

The point was copy-pasting the getLineDash function:

```
css::uno::Any getLineDash( const css::uno::Reference<css::frame::XModel>& xModel, const OUString& rDashName )
{
    css::uno::Reference<css::lang::XMultiServiceFactory> xFact(xModel, css::uno::UNO_QUERY);
    css::uno::Reference<css::container::XNameAccess> xNameAccess (
        xFact->createInstance("com.sun.star.drawing.DashTable"),
        css::uno::UNO_QUERY );
    if(xNameAccess.is())
    {
        if (!xNameAccess->hasByName(rDashName))
            return css::uno::Any();

        return xNameAccess->getByName(rDashName);
    }

    return css::uno::Any();
}
```

...from the file ChartLinePanel.cxx to drawingml.cxx

Calling `mAny.get<drawing::LineDash>()`; was not succesful in the case of charts, so if the result has 0 values, we call the „new” `getLineDash(...)` function:

```

switch (aLineStyle)
{
  case drawing::LineStyle_NONE:
    bNoFill = true;
    break;
  case drawing::LineStyle_DASH:
    if (GetProperty(rXPropSet, "LineDash"))
    {
      aLineDash = mAny.get<drawing::LineDash>();
      if (aLineDash.Dots == 0 && aLineDash.DotLen == 0 && aLineDash.Dashes == 0
          && aLineDash.DashLen == 0 && aLineDash.Distance == 0) {
        OUString aLineDashName;
        GET(aLineDashName, LineDashName);
        if (!aLineDashName.isEmpty()) {
          if (xModel) {
            css::uno::Any aAny;
            aAny = getLineDash(xModel, aLineDashName);
            aLineDash = aAny.get<drawing::LineDash>();
          }
        }
      }
    }
  }
}

```

And its result overwrites the former value of `aLineDash` variable.

Of course, in order to make this working, we need to modify some header files and the parameters of the function:

drawingml.cxx, WriteOutline function (where we call the „new” getLineDash function):

```
void DrawingML::WriteOutline( const Reference<XPropertySet>& rXPropSet, Reference< frame::XModel > const & xModel ) {
```

drawingml.hxx

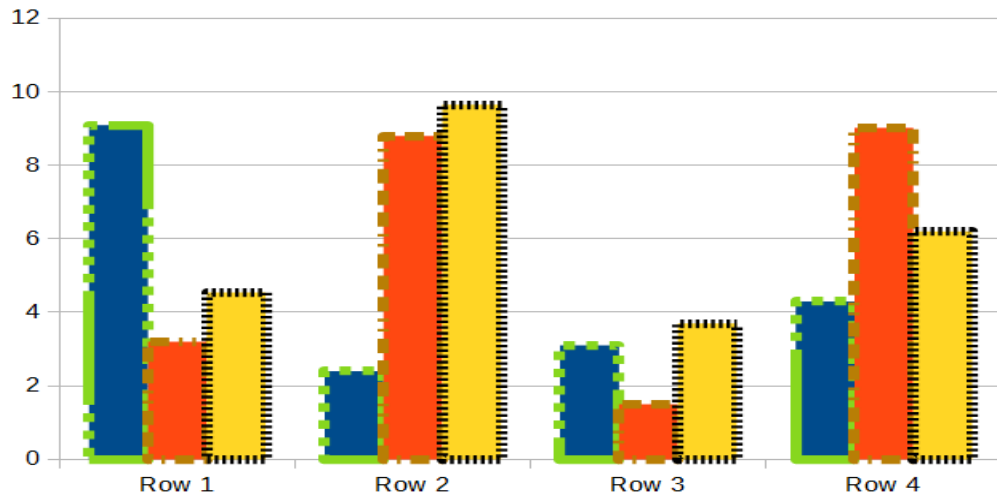
```
namespace uno {
    class XInterface;
}
namespace frame {
    class XModel;
}
}}}

void WriteOutline( const css::uno::Reference< css::beans::XPropertySet >& rXPropSet,
                  css::uno::Reference< css::frame::XModel> const & xModel = nullptr );
```

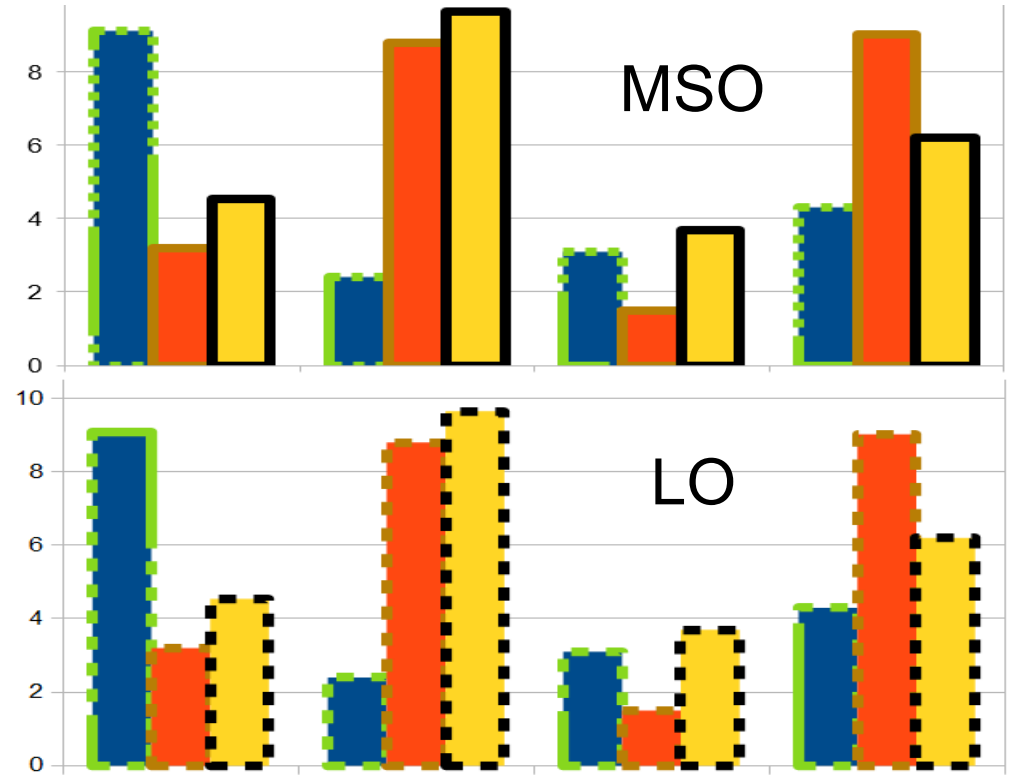
chartexport.cxx (where we call WriteOutline function):

<pre>void ChartExport::exportShapeProps(const Reference< XPropertySet >& xPropSet) { FSHelperPtr pFS = GetFS(); pFS->startElement(FSNS(XML_c, XML_spPr), FSEND); exportFill(xPropSet); WriteOutline(xPropSet); pFS->endElement(FSNS(XML_c, XML_spPr)); }</pre>	<pre>void ChartExport::exportShapeProps(const Reference< XPropertySet >& xPropSet) { FSHelperPtr pFS = GetFS(); pFS->startElement(FSNS(XML_c, XML_spPr), FSEND); exportFill(xPropSet); WriteOutline(xPropSet, getModel()); pFS->endElement(FSNS(XML_c, XML_spPr)); }</pre>
--	--

Of course, this fix is not perfect. We still have to work about the LO preset linestyles:



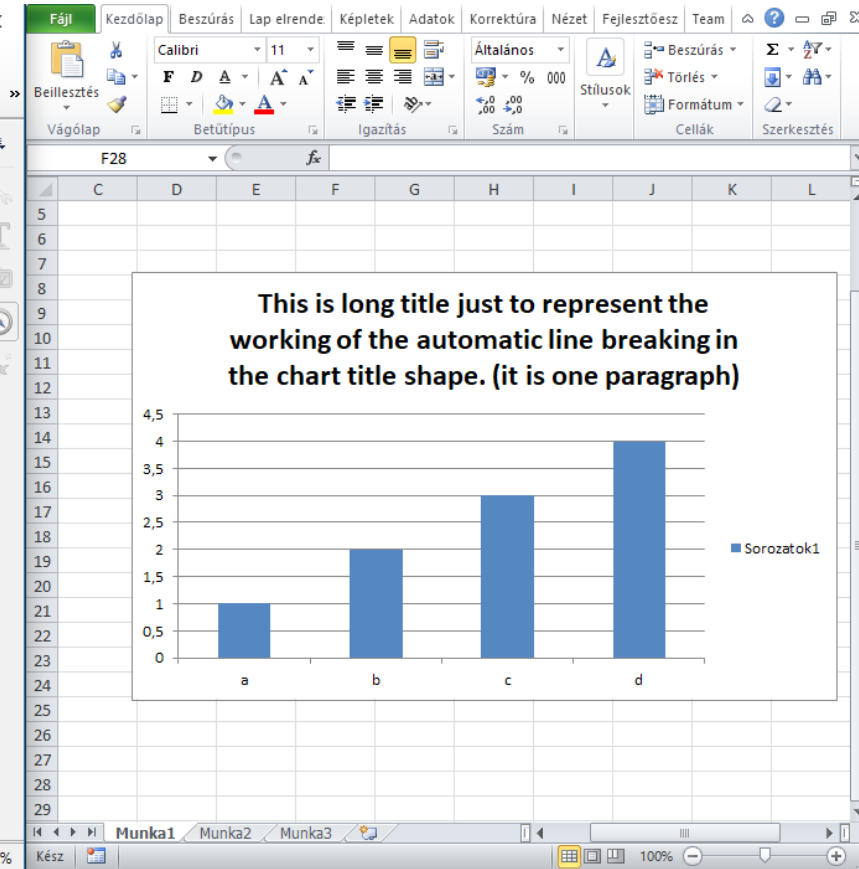
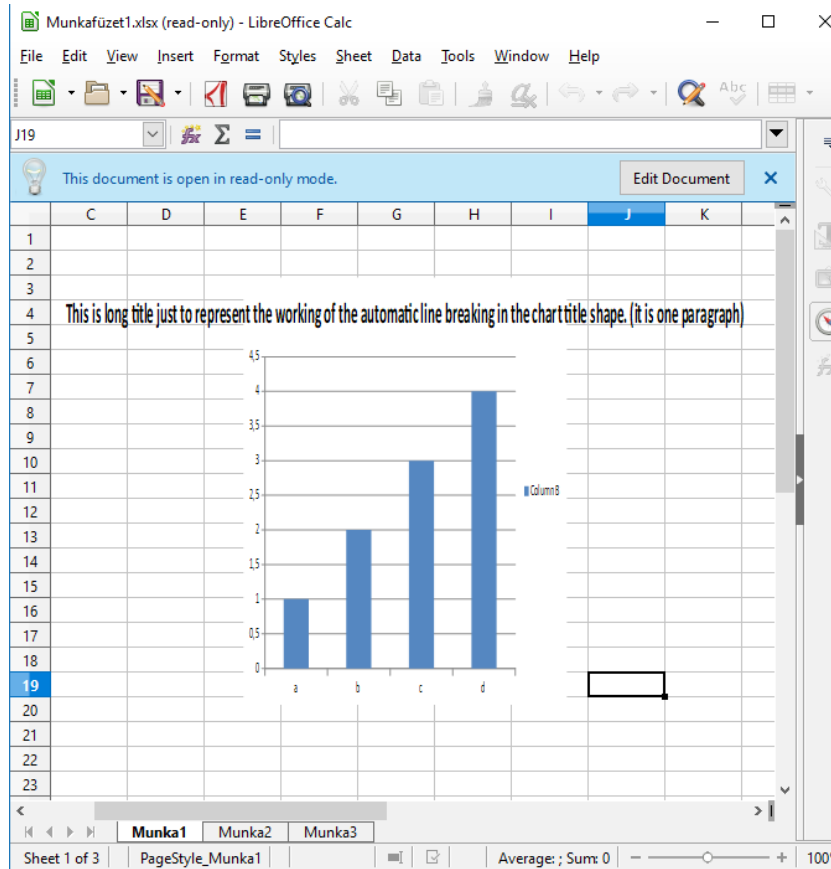
before ooxml export in LO



after ooxml export in LO

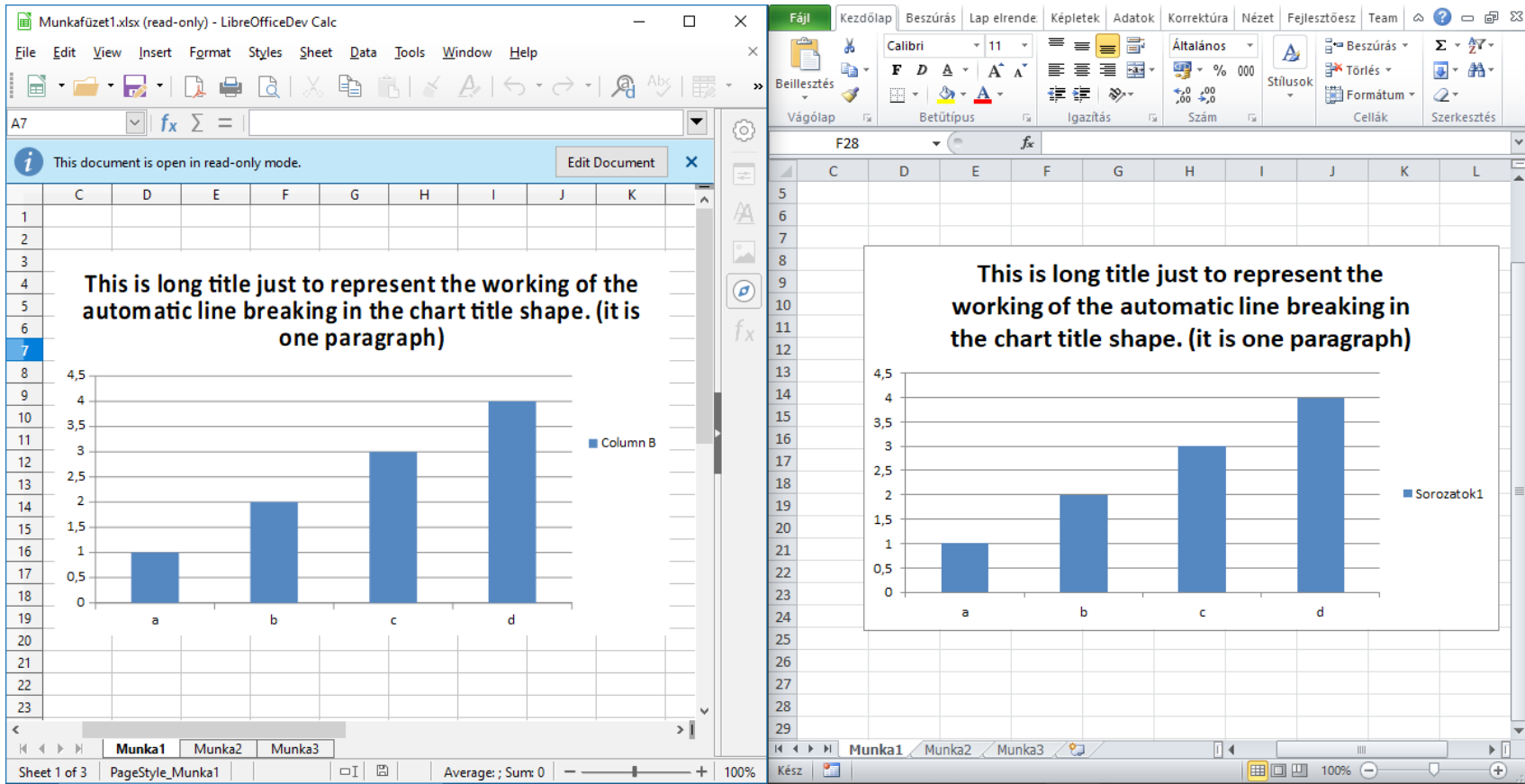
tdf#108028 Fix line breaking of chart title (before the fix)

- LibreOffice previously distorted the text and squeezed the chart, because the textbox of chart legend could not automatically wrap the text..

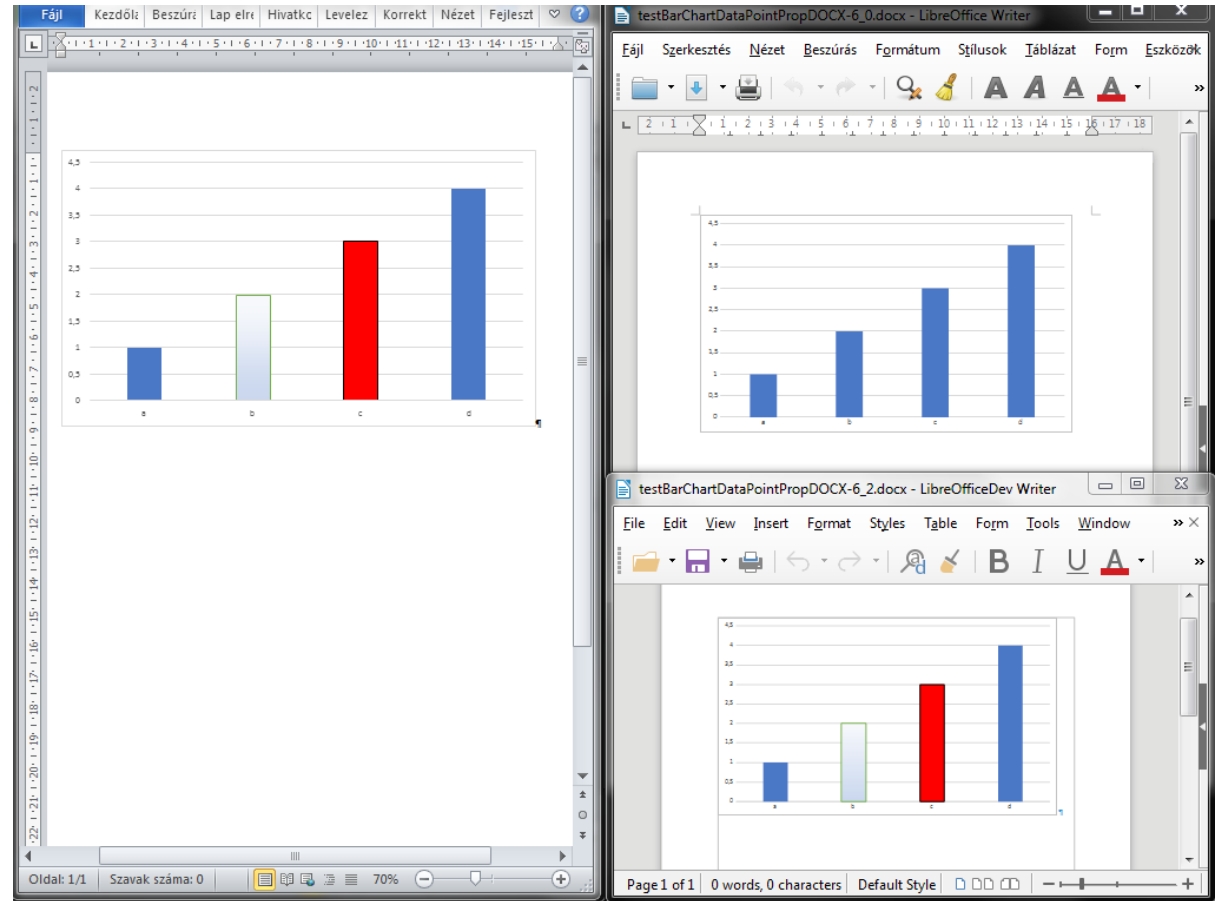


tdf#108028 Fix line breaking of chart title (after the fix)

With the fix LibreOffice automatically wrap the text in the chart title textbox

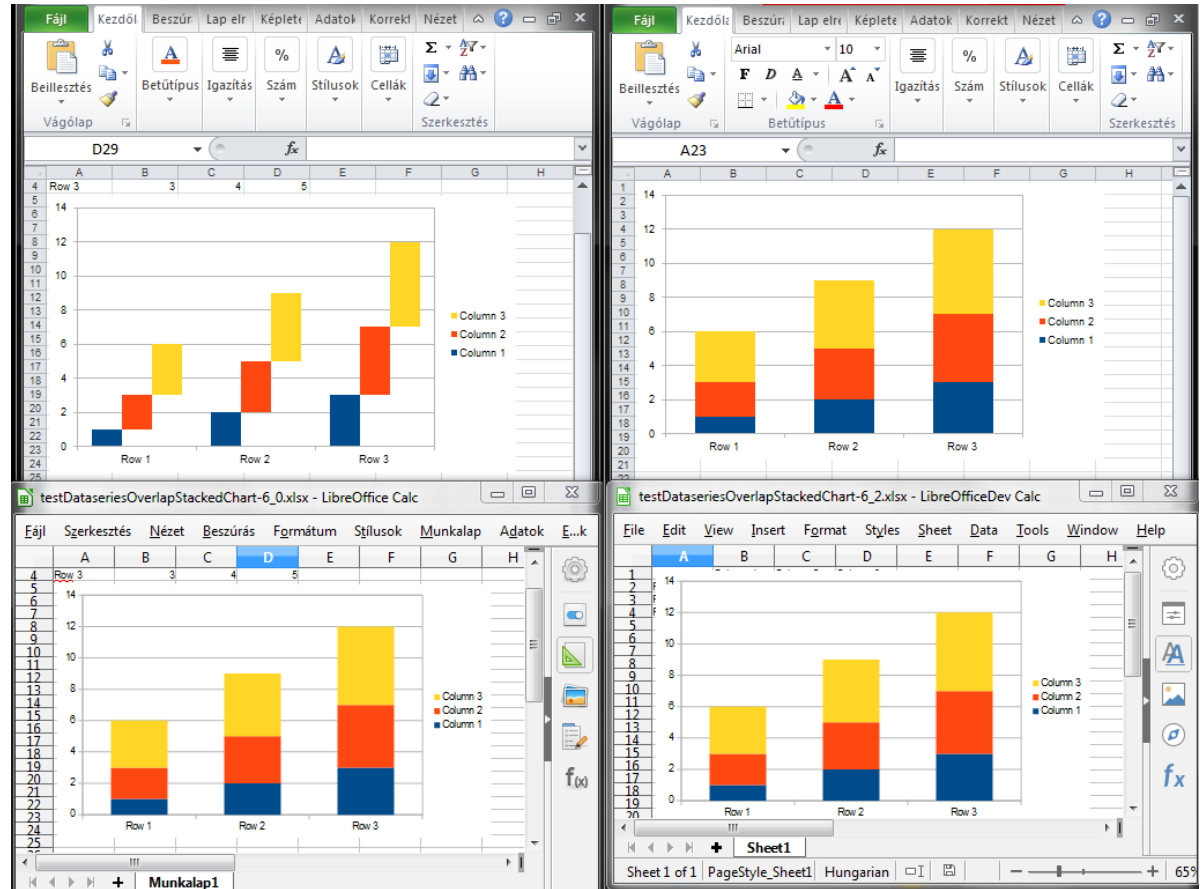


- If the color or other property of a datapoint in the chart deviates from the dataserie property, a separate dPt tag will be written into the XML and fixing the lost properties during OOXML export.



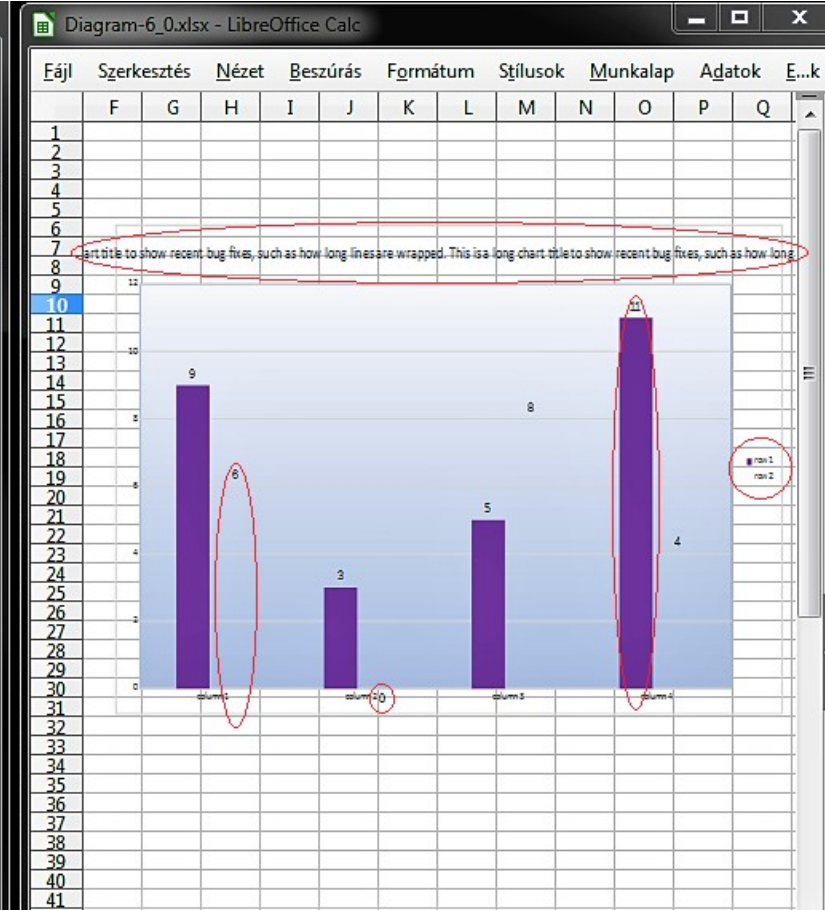
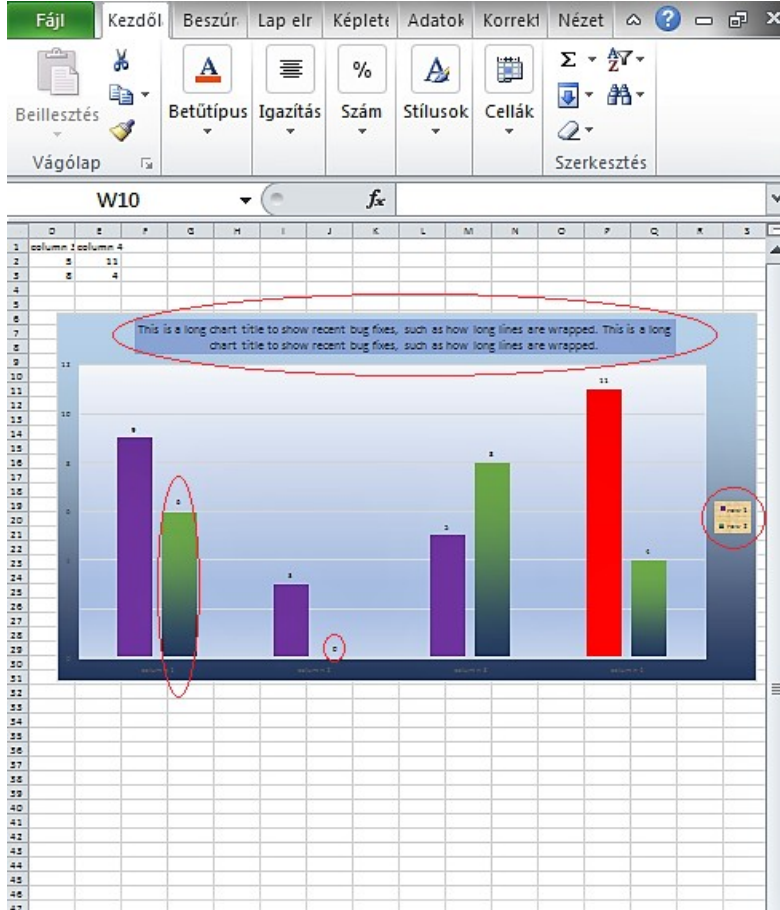
Tdf#94502 OOXML Fix/Workaround overlap export of Stacked Column/Bar Chart

- Export the Overlap value with 100% for stacked charts, because the default overlap value of the Bar/Column chart is 0% and LibreOffice do nothing with the overlap value in Stacked Chart case, unlike the MS Office.



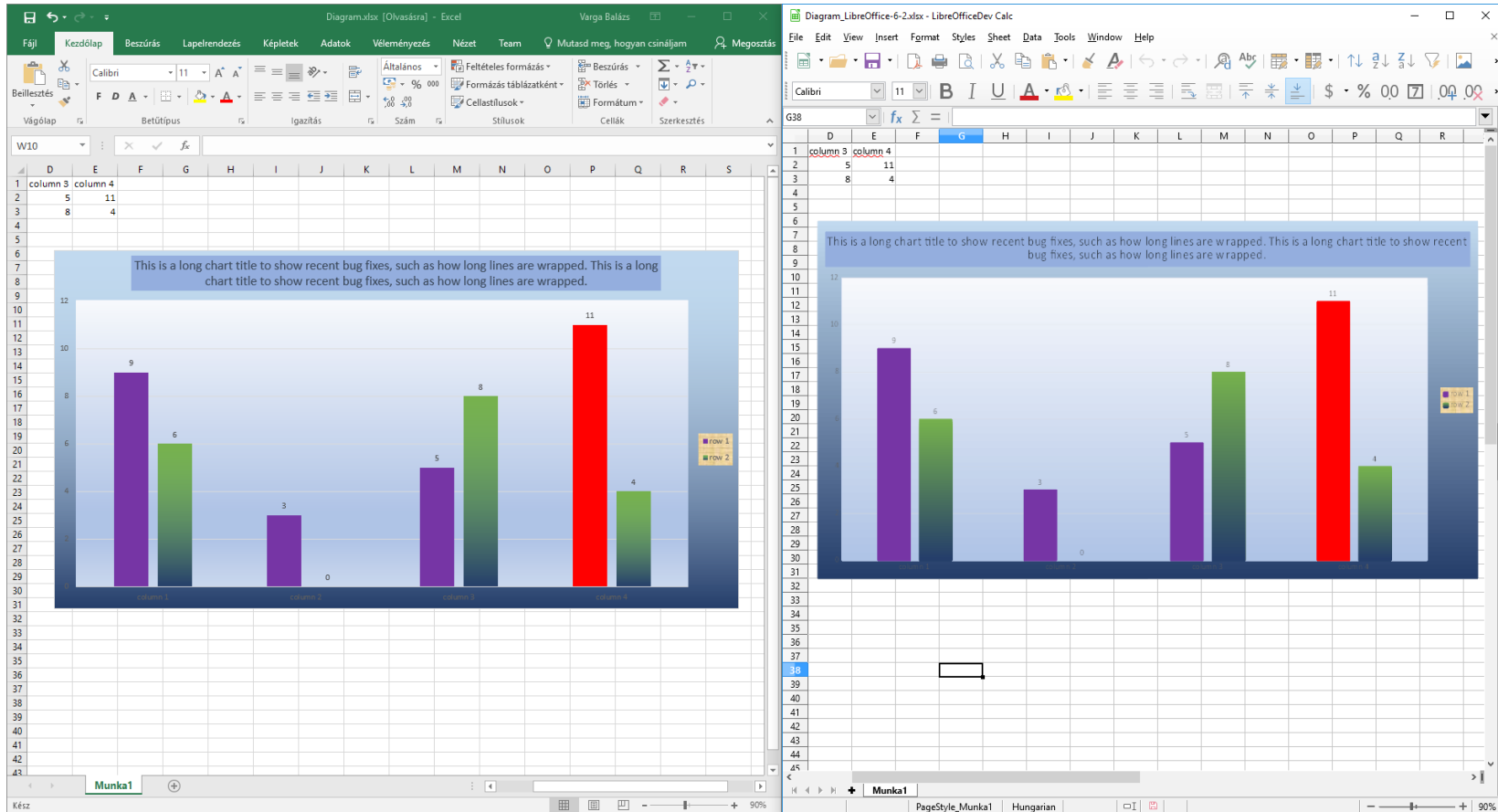
OOXML Export Chart shapes fill properties and some other bugs in one chart before a few fixes

- Just to represent how a Column charts looked like in LibreOffice 6.0.4 around july



OOXML Export Chart shapes fill properties and some other bugs in one chart after a few fixes

Just to represent how a Column charts looks like in LibreOffice 6.2 these days



Thanks for the guidance from László
Németh,
and the attention from our viewers

LIGHTNING TALK
SYSTEM-DEPENDENT DATA BUFFERING

CIB SOFTWARE GMBH
TIRANA, FRIDAY 27. SEPTEMBER 2018

ARMIN LE GRAND



SYSTEM-DEPENDENT DATA BUFFERING

- > Transformation-invariant Instance of Data needed (translate/scale)
- > OutputDevice to SAL-calls extended to use B2DHomMatrix as ObjectToViewTransform (old trasfomed to DeviceCoordinates)
- > SystemDependentData (only known in sys-dep files/paths/Validity)
 - SystemDependentData_CairoPath (Cairo/Line)
 - SystemDependentData_GraphicsPath (Win/Line/Fill)
 - SystemDependentData_GdiPlusBitmap
 - SystemDependentData_Triangulation (X11 Line/Direct Triangulation, no Trapezoids anymore)
- > SystemDependentDataManager (Global Instance/Mutex, std::shared_ptr)
 - ImplSVData::SystemDependentDataBuffer
 - size/time aspect buffering
- > SystemDependentDataHolder (std::weak_ptr)
 - ImplBufferedData → B2DPolygon, B2DPolyPolygon
 - WinSalBitmap
- > Uses typeid(T).hash_code() RTTI to identify



LibreOffice
The Document Foundation



**What
Designing with LibreOffice
Taught Me**

Franklin Weng
TIRANA | 28 Sept. 2018



LIBOCON
TIRANA 2018

Designing with LibreOffice

Home LibreOffice The author Reviews Download / Buy Contact Blog



Designing With LibreOffice, by Bruce Byfield, 2016
Has anyone ever **deeply** read this book?

Main Translator of Traditional Chinese version:



Cheng-Chia Tseng



Jeff Huang



Franklin Weng

*Also thanks to: Mark Hung, Bo-Ren Lin and Wei-Lun Chao

What Designing With LibreOffice Taught Me

1. Use **style** instead of manually adjusting formats

Is that a common sense?
Apparently not.

春天感受春意

與烏來有約

烏來：位於臺北縣最南端，是臺北盆地周圍地勢較高之處，為臺北縣面積最大的鄉鎮。……烏來境內有臺灣最大的林區『福山林區』，林木蓊鬱，全鄉土地 80 % 為森林所覆，……涵養大台北地區的水資源，而植物方面有本區特有的烏來杜鵑、臺灣三角楓、烏來……蕘花等，因稀有及原始性，極具有學術及教育價值，福山的哈盆自然資源更是豐……富，有『臺灣亞馬遜』之稱。

烏來：由於森林繁茂，溪流交錯，有利各種鳥類及哺乳類動物孳生，較具特色的有帝雉、……藍腹鵝、臺灣藍鵲、竹雞、臺灣黑熊、臺灣野豬、臺灣獼猴、白鼻心等，但經長期獵……捕，已所剩無多。烏來南勢溪、桶後溪、哈盆溪皆是臺灣富盛名之溪釣場所，常見……魚類有臺灣魚斑、福山魚、香魚、虹鱒、臺灣纓口鮒....等。

獨特優雅的櫻花道

2. Create your own **templates**
with styles you frequently use.

Is that a common sense?
Never.

3. Making images fixed in Writer is quite upsetting.

It's true when I merged every chapter of this book together...

4. Good and correct cross reference is really interesting and amazing.

Before merging...

Sometimes designed by more than one person and often for love of typography rather than for money, the best free-licensed fonts like Gentium easily rival commercial fonts.

Many Linux distributions include a few free-licensed fonts in their package repositories. For other places where you can find free-licensed fonts, see Appendix C, “[Error: Reference source not found](#),” page [Error: Reference source not found](#).

Installing fonts for LibreOffice

Both LibreOffice and Apache OpenOffice support fonts in Portable Font Format (.pfb), TrueType (.ttf), and OpenType (.otf).

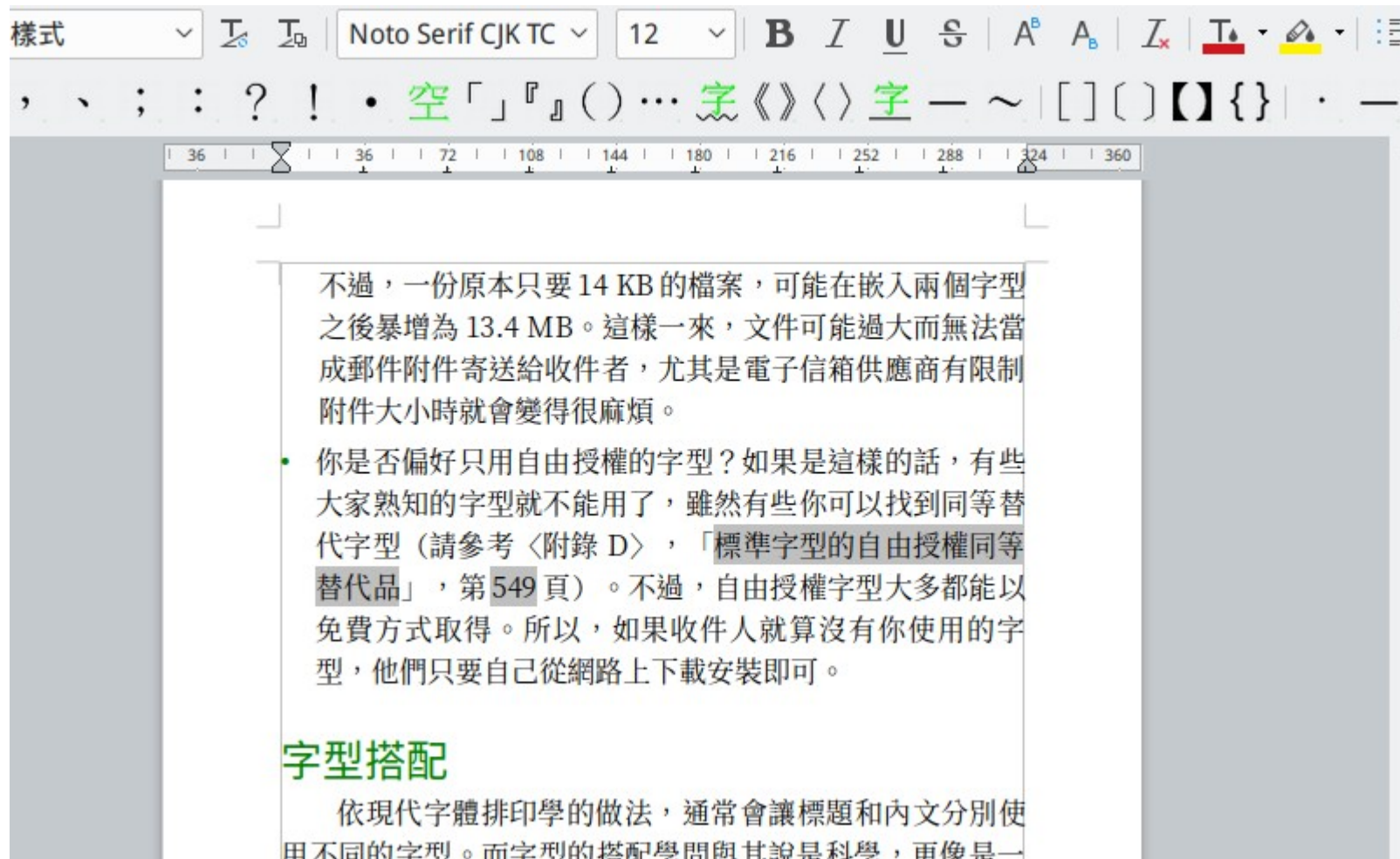
- 你是否偏好只用自由授權的字型？如果是這樣的話，有些大家熟知的字型就不能用了，雖然有些你可以找到同等替代字型。（請參考〈附錄 D〉，「錯誤：找不到參照來源」，第 錯誤：找不到參照來源頁）。

不過，自由授權字型大多都能以免費方式取得。所以，如果收件人就算沒有你使用的字型，他們只要自己從網路上下載安裝即可。

字型搭配

依現代字體排印學的做法，通常會讓標題和內文分別使用不同的字型。而字型的搭配學問與其說是科學，更像是一門藝術。不過你可以透過以下的規則來選字型，提升找到適當字型的機會：

After merging...



I don't need to do any additional setting!

5 Don't generate TOC like this

目錄	
壹、專案概述.....	1
一、專案名稱及時程.....	1
二、專案執行目標.....	1
三、專案範圍.....	1
貳、專案工作項目及執行策略.....	3
一、記者會.....	3
二、政策說明會.....	3
三、教育訓練.....	3
四、平面媒體報導.....	5
五、製作 <u>ODF</u> 懶人包.....	5

The result is ugly. It is also clumsy.

– Bruce Byfield,
Designing With LibreOffice, 2016

Unfortunately...

6. Don't use slides in speeches.

Hey, what am I doing?

If you really want to use slides

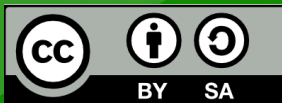
- Don't generate your slides this way.
- Summary slides can be useful only under one condition:
 - When there is no audience.

Anyway, we made it.

After translating and merging every chapter together, I'm feeling like an expert of typography.

Highly recommend you to deeply read it!

*And learn Chinese at the same time



All text and image content in this document is licensed under the Creative Commons Attribution-Share Alike 4.0 License (unless otherwise specified). “LibreOffice” and “The Document Foundation” are registered trademarks. Their respective logos and icons are subject to international copyright laws. The use of these thereof is subject to trademark policy.



LibreOffice
The Document Foundation



Vertical Ruby Support in LibreOffice

Mark Hung

marklh9@gmail.com

TIRANA | 28 Sept. 2018



LIBOCON
TIRANA 2018



“Ruby” aka Asian Phonetic Guide

- Is a way to mark CJK ideographs so that people know how to read them.
- For children in Taiwan.
- Essential for Japanese names.

き も ん

ほう が く

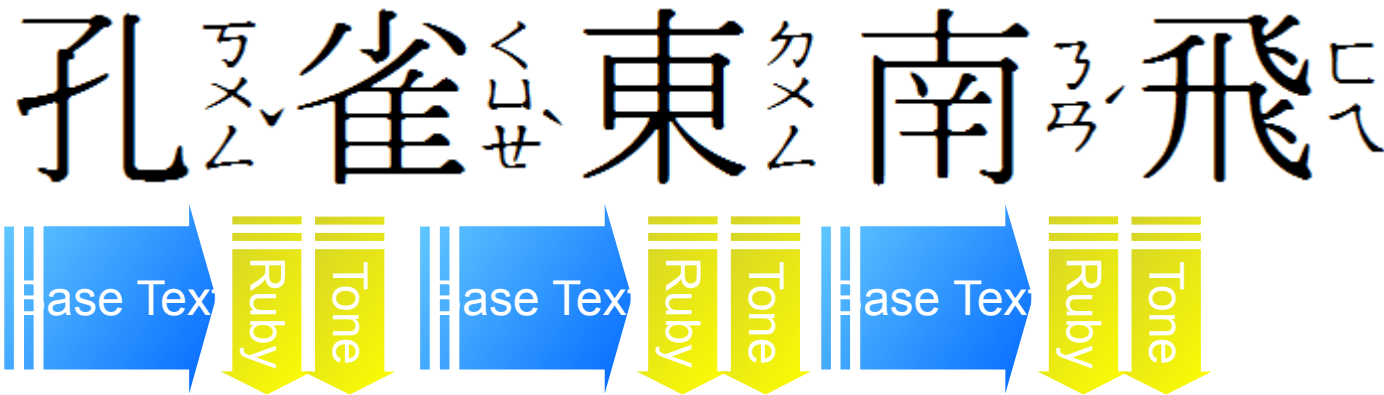
ぎ ょ う し

鬼門の方角を凝視する。



Vertical Ruby

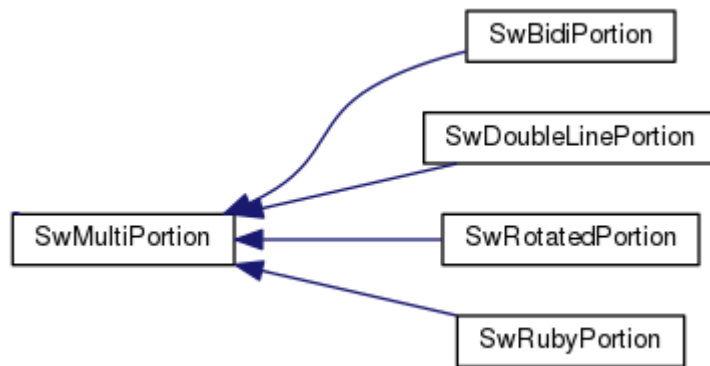
- LibreOffice supports ruby over or below the base text since beginning.
- Marking on the right vertically is used in Taiwan. Top or bottom is rare.





Challenge: SwMultiPortion

- Fear of breaking BIDI support





Features ready in LibreOffice 6.1

- Text layout. 聞_{ㄨㄣˊ}說_{ㄕㄨㄛˋ}雙_{ㄕㄨㄤ}溪_{ㄒㄩ}春_{ㄔㄨㄥ}尚_{ㄕㄨㄥˋ}好_{ㄏㄠˇ}
- New option for ruby position in the ruby dialog.
- ODF import / export with loext:ruby-position.
- DOCX import / export ready.

Thanks for Listening



All text and image content in this document is licensed under the Creative Commons Attribution-Share Alike 4.0 License (unless otherwise specified). “LibreOffice” and “The Document Foundation” are registered trademarks. Their respective logos and icons are subject to international copyright laws. The use of these thereof is subject to trademark policy.





Collabora Productivity

Text layout performance

By Miklos Vajna
Software Engineer at Collabora
Productivity
2018-09-28

Motivation

Quoting the TDF wiki:

- All over the code base assumes shaping text is cheap
- We can do it over and over again
- Want to measure the text? Shape it and discard the output afterwards. Want to measure part of the same text? Shape again. Want to find line breaks? Shape again. Want to finally draw it? Shape again.
- In contrast, other toolkits typically calculate the layout explicitly:
 - e.g. GtkLabel has an explicit PangoLayout, etc.



Work done: shared code

vcl

- StatusBar (thanks to Tamás Bunth)
- ListBox
- Menu

svtools

- Ruler

Not a cache: just lazy-calculate the layout

Work done: Writer

Good news

- Everything goes through SwFntObj
- Can cache GetTextArray(), DrawTextArray(), GetTextWidth(), GetTextBreak() calls on OutputDevice

Bad news

- Need a cache: SwFntObj typically doesn't have a good idea about the lifecycle of the created text layout
- For now: SwTextGlyphsKey stores which subset of which text was laid out on which output device
- Storing the full output device state is too expensive
 - Can't handle everything transparently in VCL

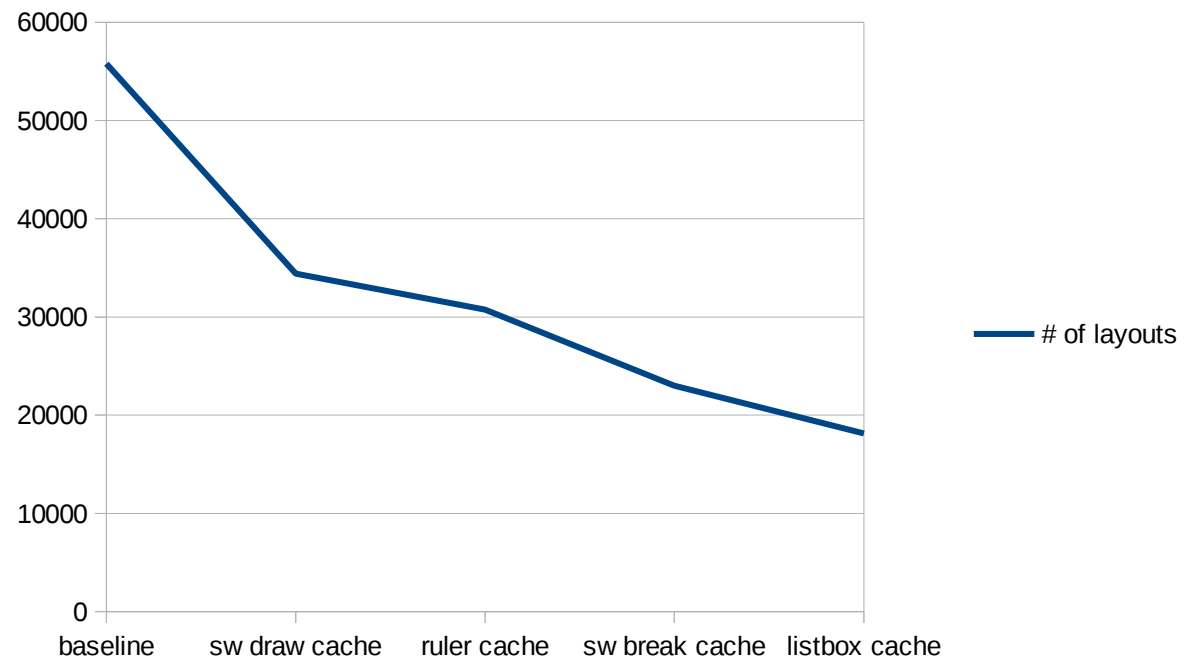
Results

Metric: # of layout calls

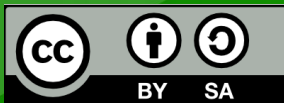
- `GenericSalLayout::LayoutText()`

Measured: one Writer scenario (equivalent of UITests in sw)

- 55793 layout calls initially
- 18126 layout calls now
- Only **32%** of the original work is performed



Thanks indeed!



All text and image content in this document is licensed under the Creative Commons Attribution-Share Alike 4.0 License (unless otherwise specified). “LibreOffice” and “The Document Foundation” are registered trademarks. Their respective logos and icons are subject to international copyright laws. The use of these thereof is subject to trademark policy.

