



To start hacking LibreOffice

FISL 2012, Updated
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What we will see today

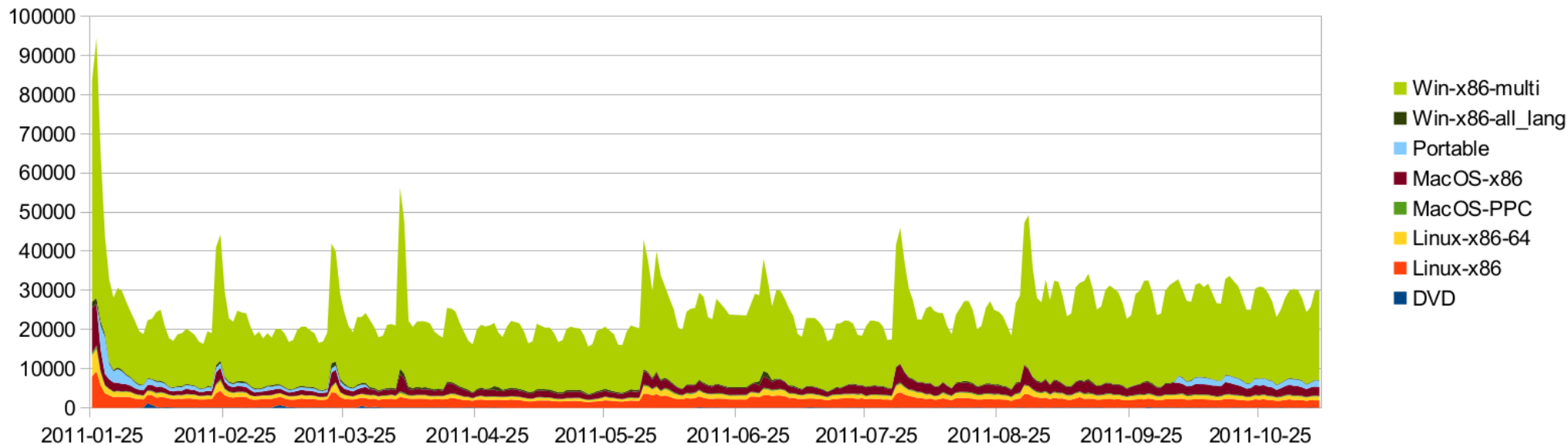
- Let's talk about the development of LibreOffice
- Let's talk about the **GIT** repository
 - Let's talk about how to download the font
- We will generate the build configuration data
 - Main build keys
- We will “**try**” to compile and solve the problems of
- compilation
- **EASY-HACKS**
- Let's talk about making **patches**

LibreOffice Development

- About the source code
 - 30,000 files
 - C, C ++ , Java, Perl, Python
 - Lots of old stuff
 - LIPOSUCTION: /unusedcode.easy
 - Comments in German
 - Do you know German? ... What a pity ...
- Preference for developing on Linux
 - RedHat, SUSE, Canonical, Lanedo, Tata developers
 - Individual Devs, ME! AND YOU !!!

Make no mistake: the World is WINDOWS

Downloads by product



> 90% is Windows

Download the LibreOffice source code

GIT repository

```
$ mkdir git
```

```
$ cd git
```

```
$ git clone git: //anongit.freedesktop.org/libreoffice/core libo
```

```
Cloning into libo ...
```

```
Remote: Counting objects: 76845, done.
```

```
remote: Compressing objects: 100% (17328/17328), done.
```

```
remote: Total 76845 (delta 60786), reused 74045 (delta 58579)
```

```
Receiving objects: 100% (76845/76845), 15.82 MiB | 1.17
```

```
MiB / s, done.
```

```
Resolving deltas: 100% (60786/60786), done.
```

```
$ cd libo
```

```
$ ./git pull -r
```

autogen

autogen.sh

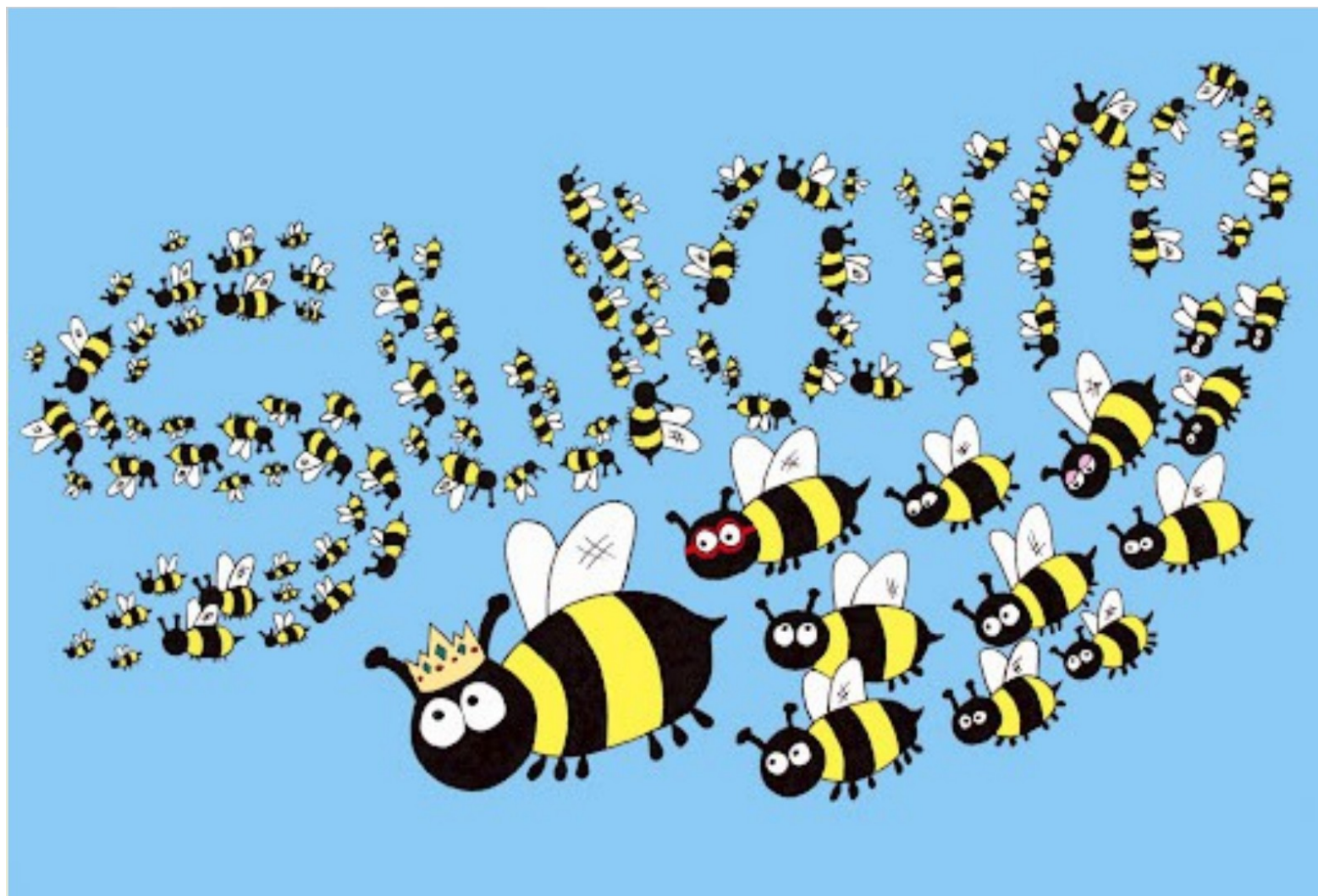
- Autogen.sh will generate
 - The environment variables
 - The settings for make
 - Check the dependencies
 - It does not allow to proceed if the dependencies are not fulfilled
 - Indicates the development packages needed by the LibreOffice
- TIP: autogen.lastrun
- TIP: sudo apt-get build-dep libreoffice

autogen.sh

- Important parameters
 - with-num-cpus
 - with-max-jobs
 - with-vendor = DARTH Vader
 - with-lang = en-US en-US
 - disable-mozilla
 - enable-kde4
- autogen.sh --help

make

- **make**
 - It does everything Compiles and linkedites
- **make dev-install**
 - Create an installation tree in your area for testing.
 - ~/git/core/install/program/soffice
- **make clean**
 - Clean everything up and start over from scratch !!!!!
- Note: download make 3.82 !!!!
- 8 hours / No. of the CPUs



What we want?

- Compile faster
 - Improving MAKES, Builds
 - Remove unused code
- Modernize the code
 - New string classes
 - New STL classes
 - New technologies in C ++ 11
 - New build technologies

What we want?

- New features
 - New OpenFormula functions
 - Impress animations
 - New interface !!!
- Improve Interoperability
 - More import filters (Corel, Visio, Publisher)
 - Microsoft interoperability (docx, xlsx, pptx)

String Refactoring

String → OUString, OString

UniString → OUString

+ other forms of strings that exist in the code...

String and **UniString** classes in disuse!

String Refactoring

Simplification of the namespace

`rtl::OUString` → `OUString`

`rtl::OString` → `OString`

Using `rtl::OUString` → (nothing)

Using `rtl::OString` → (nothing)

String Refactoring

OUString (RTL_CONSTASCII_USTRINGPARAM
("Bla bla bla")) → OUString ("bla blabla ")

OString (RTL_CONSTASCII_STRINGPARAM
("Bla bla bla")) → OString ("bla blabla")

Other macros that embed these: C2U, A2U

String Refactoring

OString MeuString;

...

- MeuString = OString ("bla bla bla ");

+ MeuString = "bla bla bla";

OString MeuString;

...

- MeuString = OString ("bla bla bla ");

+ MeuString = "bla bla bla";

String Refactoring

Exceptions:

Return

`return "bla bla bla";` → `return OUString ("bla bla bla");`

`return "bla bla bla";` → `return OString ("bla bla bla");`

Ternary operator "?"

`MeuString = Cond? "Yes" : "No";`

`MeuString = Cond? OUString ("Yes") : OUString ("No");`

Booleans

- `Sal_Bool` → `bool`
- `Sal_True` → `true`
- `Sal_False` → `false`

Unused code

Routines that are never called

Can be discarded

[unusedcode.easy](#) at the root

Delete: * .cxx and * .hxx, and possibly others things like * .hrc and * .src

SwSortElements::Insert(SwSortElement* const&, unsigned short&)

SwSortElements::Insert(SwSortElement* const*, unsigned short)

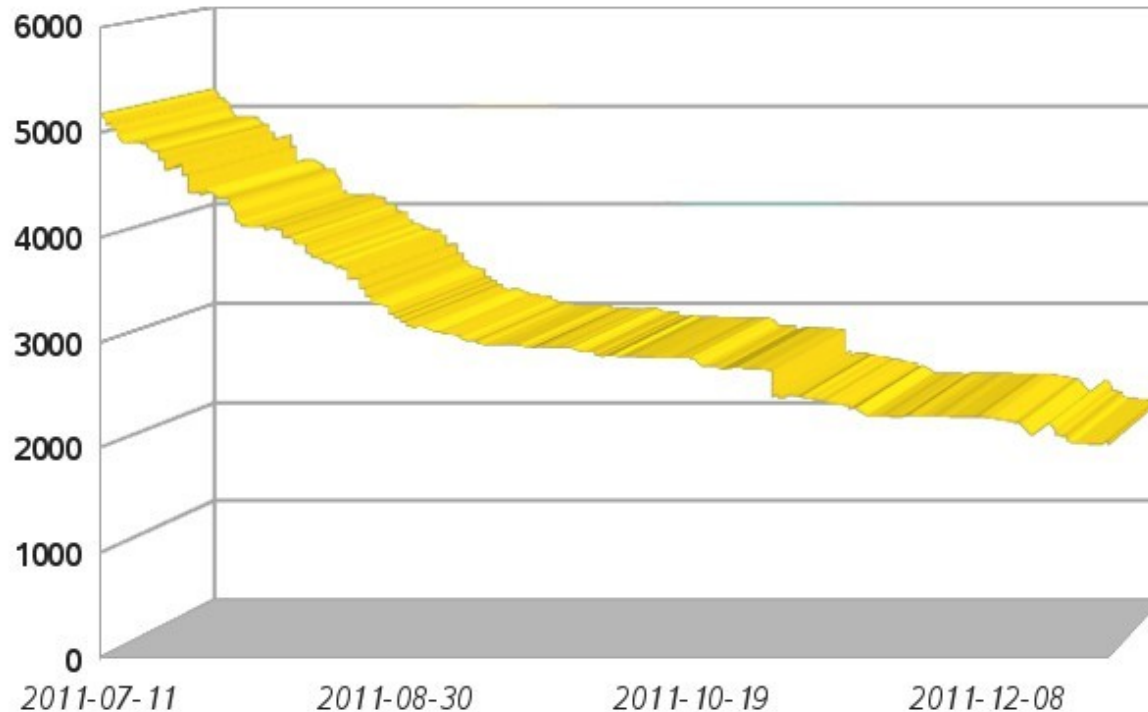
SwSortElements::Insert(SwSortElements const*, unsigned short, unsigned short)

SwSortElements::Remove(SwSortElement* const&, unsigned short)

SwSortElements::Remove(unsigned short, unsigned short)

Unused code

**Known unused methods in LibreOffice
remaining to be removed ...**



Easy Hacks

- Excellent to start developing.
 - Mentoring of some of our MEGADEVs
- Some are super-easy
 - Cleaning the code:
 - BUG 43058: remove double; in the code
 - BUG 42768: Kill the dog!
- [<wiki>/Development/Easy_Hacks](#)
- Sorted by competence
 - [<wiki>/Development/Easy_Hacks_by_required_Skill](#)
- Sorted by difficulty
 - [<wiki>/Development/Easy_Hacks_by_Difficulty](#)

Patching the code

- You did a PATCH !!!!!
 - Tested, tested, tested ... and it works !!!!
 - You now need to submit the Patch to MEGADEVS
- **git add <my modified file>**
 - Opens a new file in vi for you to describe your
 - modification
 - 1st line is title, 2nd is empty, 3rd is description with details
- **git commit**
 - Insert your file into git
- **./logerrit submit**
 - Submit your commit for MEGADEVS analysis

GERRIT

- **Gerrit** is a tool for patch collaboration
- You submit your patch and it is visible to everyone
- A developer will review and apply your patch
- <http://gerrit.libreoffice.org>
- Always use **gerrit**
- **Very easy setup** : use your OpenID (Google account, Yahoo, Twitter, etc ...)
- **Security with your SSH key**
- Instructions:
 - <http://wiki.documentfoundation.org/Development/gerrit/setup/pt-br>

More tips, important

- Devs mailing list in Brazil (in Portuguese)
 - dev@pt-br.libreoffice.org
 - To start and discuss in Portuguese
- LibreOffice dev mailing list
 - <http://lists.freedesktop.org/mailman/listinfo/libreoffice>
 - This list is where devs discuss everything related to code development, C ++, Patches, etc...
- IRC: [irc.freenode.net](https://freenode.net), # libreoffice-dev
 - Online megadevs, to answer questions
- <http://docs.libreoffice.org/>

Let's get to work!

Thanks!

... For supporting LibreOffice!



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