

Base hacking: come join us!

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TDF, Debian, Gestman, ...

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Introduction: who's this guy

Not your typical LibreOffice hacker...

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Not your typical LibreOffice hacker... \LaTeX , \TeX , \TeX_{macs}

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Not your typical LibreOffice hacker...

Active in:

- ▶ Debian (\approx 2004)
- ▶ LibreOffice (2011)

LibreOffice: Programming platform for database front-end applications. Microsoft Access killer.

- ▶ Nice programming platform for me.
- ▶ Users can make their own queries (GUI)
- ▶ (Lost hope users making own reports.)

Examples:

- ▶ Customer database
- ▶ Timesheet
- ▶ Billing

Involvement in Base: why, history

Hopes:

- ▶ FLOSS
- ▶ More stable / backwards compatible
- ▶ Better FLOSS DBMS interoperability (MySQL ^W MariaDB / PostgreSQL)

Start: fixup the PostgreSQL native driver → in business.

Cycle of “just have to ...”:

- ▶ 3.4 sucks (Base bitrotten), but I'll fix
- ▶ 3.5beta/rc: users test... serious bugs left
- ▶ missing features: auto-shrink/expand controls according to content in print-outs.
Can hack it in reports (table → optimal row height)

Hacking Base

Lack of people that *understand, use, care* (in right priority).

Some, but not enough.

Break cycle “users don’t upgrade because b0rken ↔ developers don’t hear about issues ↔ developers don’t fix issues”

All kinds of jobs, all kinds of skillsets:

- ▶ Triage
- ▶ Historic knowledge (there is this non-merged CWS...)
- ▶ Vague bugreport → reproduction instructions
- ▶ Code pointer (problem/weirdness here, but dunno how to fix)
- ▶ `if (foo) bar; else bar;`
- ▶ Easyhacks

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Come aboard!

LibreOffice contributors community very welcoming
Base taskforce? Specific ML?

Typical causes

Infrastructure changed, LibO adapted except Base

- ▶ OPEN: mouse-resize control (report) → LO busy beaver infinite CPU/memory?
- ▶ crash when copy/paste/move report control (base class changed `clone()` model)
- ▶ Report wizard: cannot rename fields (overlapping windows → now the bottom one is on top)

Who thought this could ever be a good idea?

- ▶ Database returns NULL in non-NULLable column? Replace that by value returned by C++'s default constructor for that type.
- ▶ Insert row and no value specified for non-NULLable column? Replace that by value returned by C++'s default constructor for that type.

Typical causes

We merged half-ready code

- ▶ Only first 40 records loaded in search (isLast() lied, because new windowed cache 80% done)
- ▶ crash on SELECT DISTINCT (API change, not all calling code adapted)

64 bit computers are a new-fangled thing nobody uses <sarcasm>

- ▶ Loads of ODBC-on-64bits problems
(and 32-bit era Microsoft failed to future-proof API)
 - ▶ Crash (with smashed stack) FreeTDS ODBC driver
 - ▶ *Different* (smashed stack) crash FirebirdSQL ODBC driver
- ▶ cannot change report right/left margin

Typical causes

Spécial dédicace:

- ▶ No UI to set ADO (ActiveX Data Object) sources.
The UI is *one* API call to a Microsoft DLL.
Early Windows Vista SDK missed the right header... →
disable ADO when compiled with Vista SDK. Fixed in SDK,
but “disable” stuck. In cleanup, code removed... “we always
use Vista SDK”.
- ▶ (not Base) PDF/A invalid colormap: a patch hunk was
disabled (corrupted header)
- ▶ copy/paste from “set ‘enable handle column’ property” to “set
‘enable control’ property” forgot to *not* change state of handle
column → two handle columns.

Typical causes

Also “normal” bugs:

- ▶ Report styles not applied (fixed by cherry-pick from pending CWS)
- ▶ no ADO support at all: compile-time computation on non compile-time data. Would have been caught by `gcc -std=c++0x` but Windows-only code.

But also

Cleanup needed:

- ▶ Two functions that do *nearly* the same thing.
- ▶ `if (foo) bar; else bar;`
- ▶ code duplication
- ▶ `#define`'d *same* constant or code snippet repeatedly in different `.cxx` files.