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, \TeXmacs
Introduction: who’s this guy

Not your typical LibreOffice hacker...
Active in:

▶ Debian (≈ 2004)
▶ LibreOffice (2011)


▶ 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 \(\rightarrow\) 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 \(\rightarrow\) 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 
  \texttt{-std=c++\texttt{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.