Automated Testing of Libreoffice

- Markus Mohrhard
- 19.10.2012

Motivation

- "Everyone makes mistakes. The important thing is to not make the same mistake twice."

  (Stephanie Perkins, Lola and the Boy Next Door)

Why automated testing?

- Find problems during development
- Highly coupled code
- Hard to find all affected places for a code change

- Fast
- Never have to fix a bug twice
- Better quality

LibreOffice

Libreoffice test concepts

Real C++ Unit tests

- Tests for level components
- Sal, bridge, …

- Good to catch bugs there early
- Difficult to implement for later modules

- Maybe mocking will provide a solution

Java based API tests

- Old OOo inherited java tests
- Hard to debug
- Until Stephan's work unreliable
- Are executed on the "check"-Tinderbox

LibreOffice

C++ based API tests

- New test framework for API tests
- All new API tests should be written for this framework
- Faster to debug than Java based tests
- Easy hack to transform all disabled java tests to c++

- Module: test + [module name]/qa/extras

LibreOffice

C++ Tests for dynamic changes

- Link statically against the module
  - No visibility problems
- Need a lot of knowledge about module internals
- Slow linking
- Fast execution

C++ Import and Export tests

- During build start a minimal Libreoffice and import a file
- Check that the file has been imported correctly
- Optionally do a roundtrip: import->export->import

- Easy to write and good test coverage
  - Tests much more than just the import filtes

- http://wiki.documentfoundation.org/Development/Calc_Import _Unit_Tests

How you can help us

How to help with automated testing?

You are a ...	How to help with automated testing?
User	Provide test documents and help with the tests where test cases can be written by users.
QA person	Provide minimal test documents with the correct licence
Extension developer	Help with API tests!
Developer	Write tests for bug fixes and convince other developers.

Future Ideas

Test all bugzilla documents on a tinderbox

- Caolan's great script to get all files from bugzilla
- Open each of these files and check if they hang or crash

- For newly crashing documents spam developers
  - Fix serious regressions much earlier

Layout tests

- Convwatch
- Talk yesterday
- Layout dumper in writer code

- Problems:
  - Regenerate documents when bugs are fixed
  - Font problems
  - Too many false failures right now

GUI testing

- We have nearly no tests that test our GUI code.
- No good framework yet
- Open for suggestions

Your ideas

- You have a great idea how to improve our tests?
- You want to help writing new tests?
- You have a piece of code and have no idea how to add a test concept for it?

- => Talk to me!

Thank you for Listening!

Automated Testing of Libreoffice