



BERLIN 2012 CONFERENCE

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Easy Hacks

or how to make a difference in LibreOffice.

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*“Stand at the crossroads and look; ask for the
ancient paths, ask where the good way is, and walk
in it, and you will find rest for your souls...” -
Jeremiah 6:16*



Overview / the basic message

▼ **Easy:**

- ▼ You can get stuck into them fast:

http://wiki.documentfoundation.org/Development/Easy_Hacks_by_required_Skill

▼ **Hacks:**

- ▼ Various kinds of small but useful code changes
- ▼ No-one blocking on your work ... nice to have

▼ **Significant**

- ▼ Which individually & collectively make a difference.

▼ **Quick Skills Audit:**

- ▼ Simple programming ?
- ▼ German & English speakers ?
- ▼ Ability to use Linux & a text editor ?

Easy: Translating German Comments ...

- ▼ Admittedly much easier if you are a German

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

- ▼ Beautiful tool tool help out with this: (thanks Miklos)

```
cd clone
```

```
bin/find-german-comments cppuhelper # random directory
```

```
forms/source/component/FormComponent.cxx:924:
```

3. Lesen der allgemeinen Properties

```
forms/source/component/FormComponent.cxx:2099:
```

```
wenn eine Verbindung zur Datenbank existiert
```

```
forms/source/component/FormComponent.cxx:2102:
```

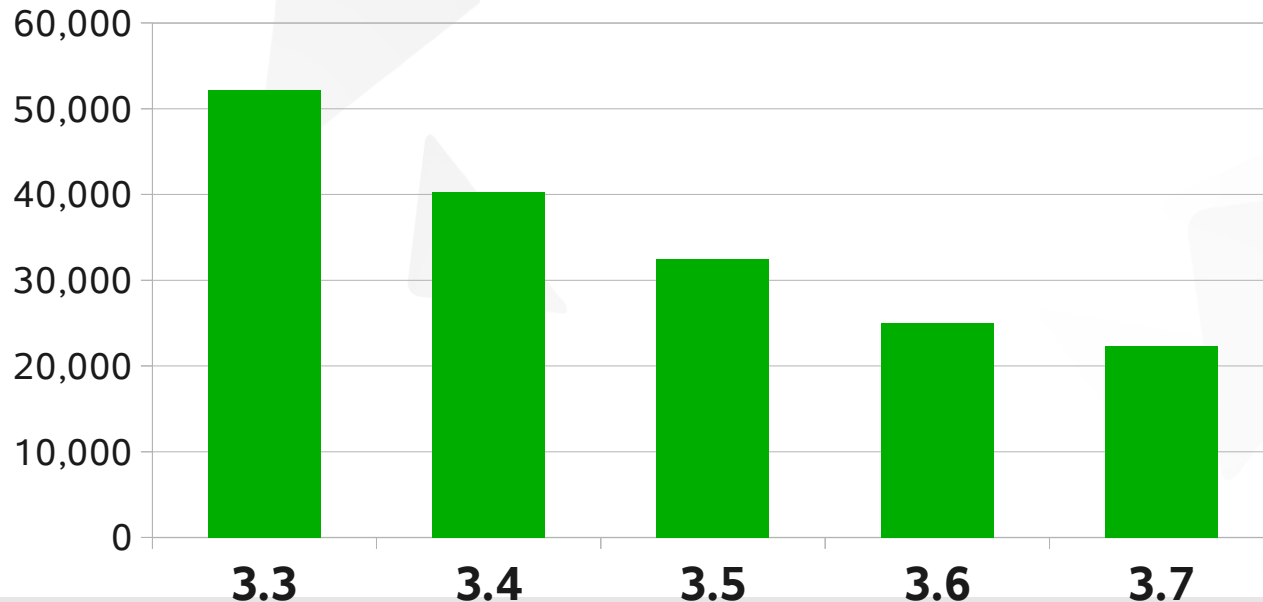
```
Feld bestimmen und PropertyChangedListener
```

```
...
```

Significant: Translating Comments ...

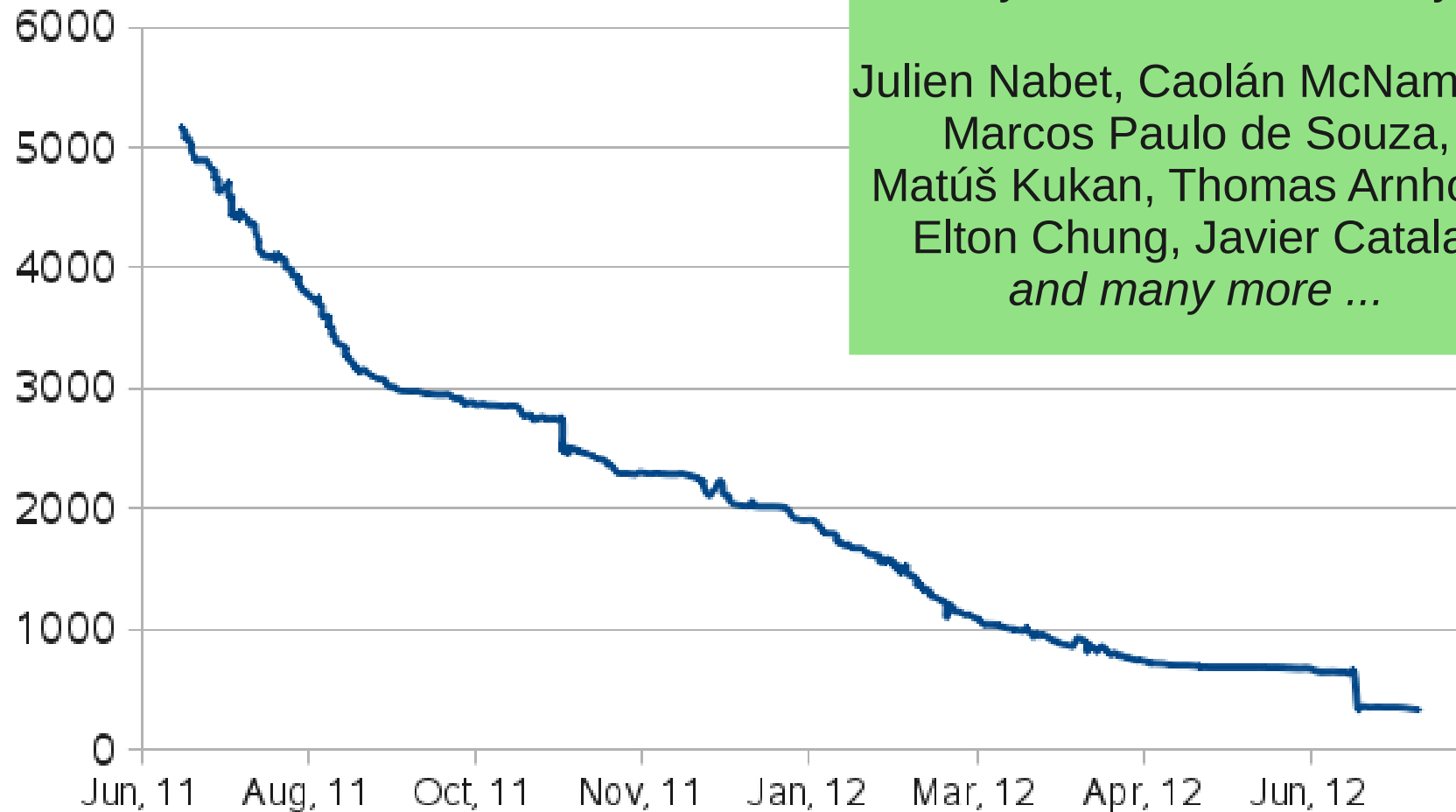
- ▼ It makes things **significantly** easier for non-Germans ...
- ▼ We removed or translated ~30k lines of these so far
- ▼ We still have 22k to go: done mostly by new guys ...
 - ▼ Thanks to all who helped !

Detected lines of German comment



Thanks to (recent translators):
Gerhard Oettl,
Tomaž Vajngerl
Philipp Riemer
Albert Thuswaldner
Philipp Weissenbacher
Mark Wolf
Josh Heidenreich
and many more !

Success story – removing unused code ...



Essentially ~**no** un-used code left anymore thanks recently to:

Julien Nabet, Caolán McNamara,
Marcos Paulo de Souza,
Matúš Kukan, Thomas Arnhold,
Elton Chung, Javier Catala,
and many more ...

Easy: Using git ...

- ▼ Git can **sound** scary – but it's not -so- bad ...
- ▼ One off setup your of name / E-mail (we like real ones)
 - ▼ `git config user.name "Jim Bob"`
 - ▼ `git config user.email "jim.bob@easy.com"`
- ▼ Checkout the code:
 - ▼ `git clone git://anongit.freedesktop.org/libreoffice/core`
- ▼ Edit a file you like
 - ▼ `git diff #` will show you your diff
- ▼ `git commit -a #` commit all changes
- ▼ `git format-patch -1 HEAD #` create a patch to E-mail us ...
- ▼ `git pull -r #` get the latest changes from others
- ▼ `git stash #` squirrel away your changes, giving a clean tree.
- ▼ `git stash pop #` get them back again ...

Easy: fixing all SvStream operators ...

▼ So:

- ▼ `git clone git://anongit.freedesktop.org/libreoffice/core`

▼ Load up: `tools/inc/tools/stream.hxx`

- ▼ `SvStream& operator<<(sal_Int16 nInt16);`
- ▼ `SvStream& operator<<(sal_Int32 nInt32); ...`

▼ Remove / re-compile with:

- ▼ 'void writeInt16(sal_Int16 nInt)' style methods

- ▼ Update all calling code & remove operator overload.

```
if( pPiece->IsUnicode() )
-     Strm() << c;
+     Strm().WriteInt32(c);
else
-     Strm() << (sal_uInt8)c;
+     Strm().WriteuInt8(c);
```

Significant: improves security & hackability

- ▼ Operator overloading / Magic type selection & inference
 - ▼ ripple/format problems from ~unrelated code change
- ▼ Nail security bugs from lame impl. of read operators:

```
SvStream& SvStream::operator>>(sal_uInt32& r)
{
    sal_uInt32 n = 0;
    READNUMBER_WITHOUT_SWAP(sal_uInt32, n)
    if (good())
    {
        if (bSwap)
            SwapULong(n);
        r = n;
    }
    return *this;
}
```

Ergo 'read' operator changes need some degree of auditing

Success story – translating wizards at runtime

- ▼ Problem:
 - ▼ Wizards duplicate tens of ODF .zip files per language
 - ▼ We ship 100+ languages
- ▼ Solution:
 - ▼ Istvan Turi – easy hack [fdo#49101](#) and others
- ▼ **Windows download is 15+Mb smaller ...**
- ▼ **Opportunity:**
 - ▼ More low-hanging fruit here
 - ▼ Size / profiling of Win32 MSI files needed ...

Easy: Making our dialogs beautiful ...

- ▼ Caolan's Widget Layout work:
<http://wiki.documentfoundation.org/Development/WidgetLayout>
- ▼ **Core skills required:**
 - ▼ Ability to install / run glade-2
 - ▼ Basic motor / mouse skills ...
- ▼ HowTo – cf. above link.
 - ▼ Examine the dialog / .src file and/or User Interface
 - ▼ Draw (using glade-2) an equivalent .ui file
 - ▼ Either: send that file in as-is, or ...
 - ▼ Remove obsoleted .src / .hrc file cruft.
 - ▼ Search / replace widget members to pointers

Significant: key to improving our look & UI

▼ Major benefits:

- ▼ This will fix dozens of point-zero / release bugs
- ▼ Fixing embarrassing translation problems

“why is Donaudampfschiffahrtsgesellschaftsk... truncated ?”

- ▼ Improve the compactness and look of dialogs for all
- ▼ Allow UI designers to improve the looks
- ▼ Removes tons of old, un-tweakable, overly verbose code
- ▼ You get to know Caolan McNamara <caolanm@redhat.com>

▼ We can't do (at all quickly) it without you:

- ▼ **600** .src file / dialogs, **33** converted so far ...
- ▼ This could be where you make your blow for our look & feel
- ▼ **6 weeks to go before feature freeze** ...

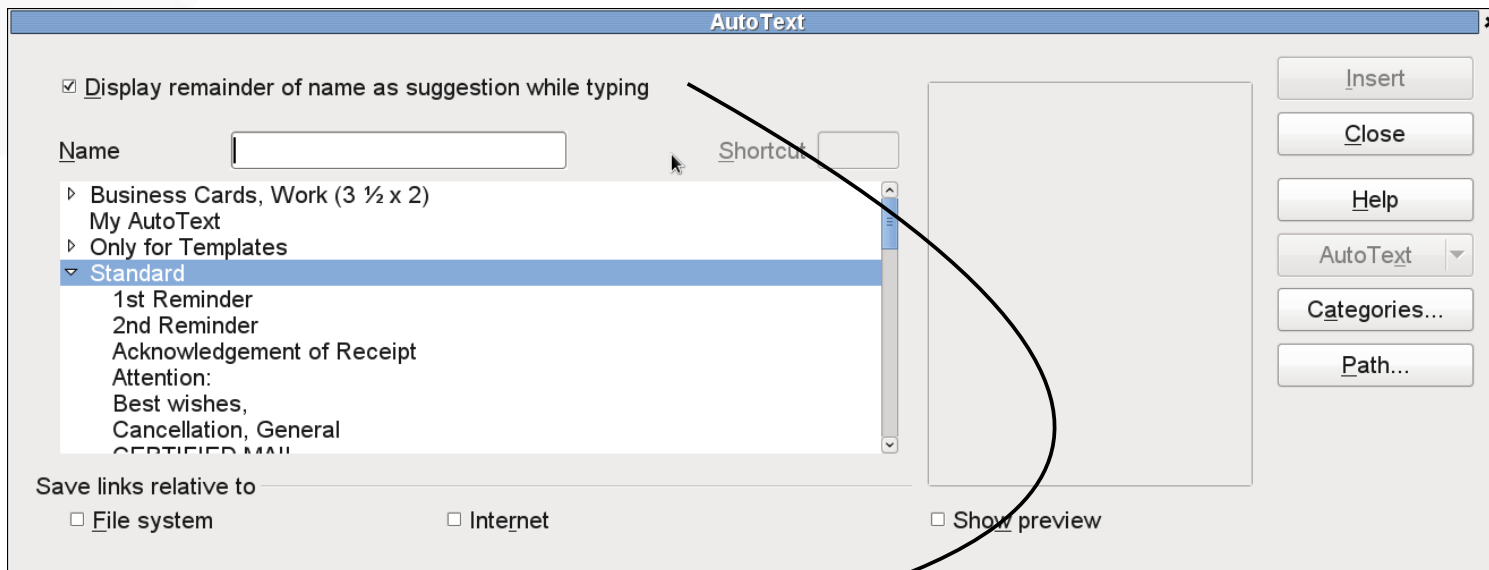
Easy: Creating a UI lookup tooling

▼ Problem

- ▼ How to find the code behind the dialog I see

▼ Solution:

- ▼ Build a database to do simple lookups:



OpenGrok
Code
Reading ...

CheckBox **CB_INSERT_TIP** ...

```
Text [ en-US ] = "~Display remainder of name as  
suggestion while typing" ;
```

Significant: accelerating the on-ramp ...

▼ Major benefits:

- ▼ People want to scratch their itch ...
- ▼ They want to get into the code ASAP
- ▼ Currently, there is a -very- high barrier to entry here.
- ▼ New developers just can't do it
- ▼ Worse – many items have inconsistent names in the code / UI
 - ▼ 'AutoText' → 'SwGlossaryDlg' etc.

▼ Skills:

- ▼ Web development / a bit of perl / python / php parse some SRC files
- ▼ Bonus points for internationalised solutions
- ▼ Bonus points for a fake menu – click the item → code ...

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For existing developers ...

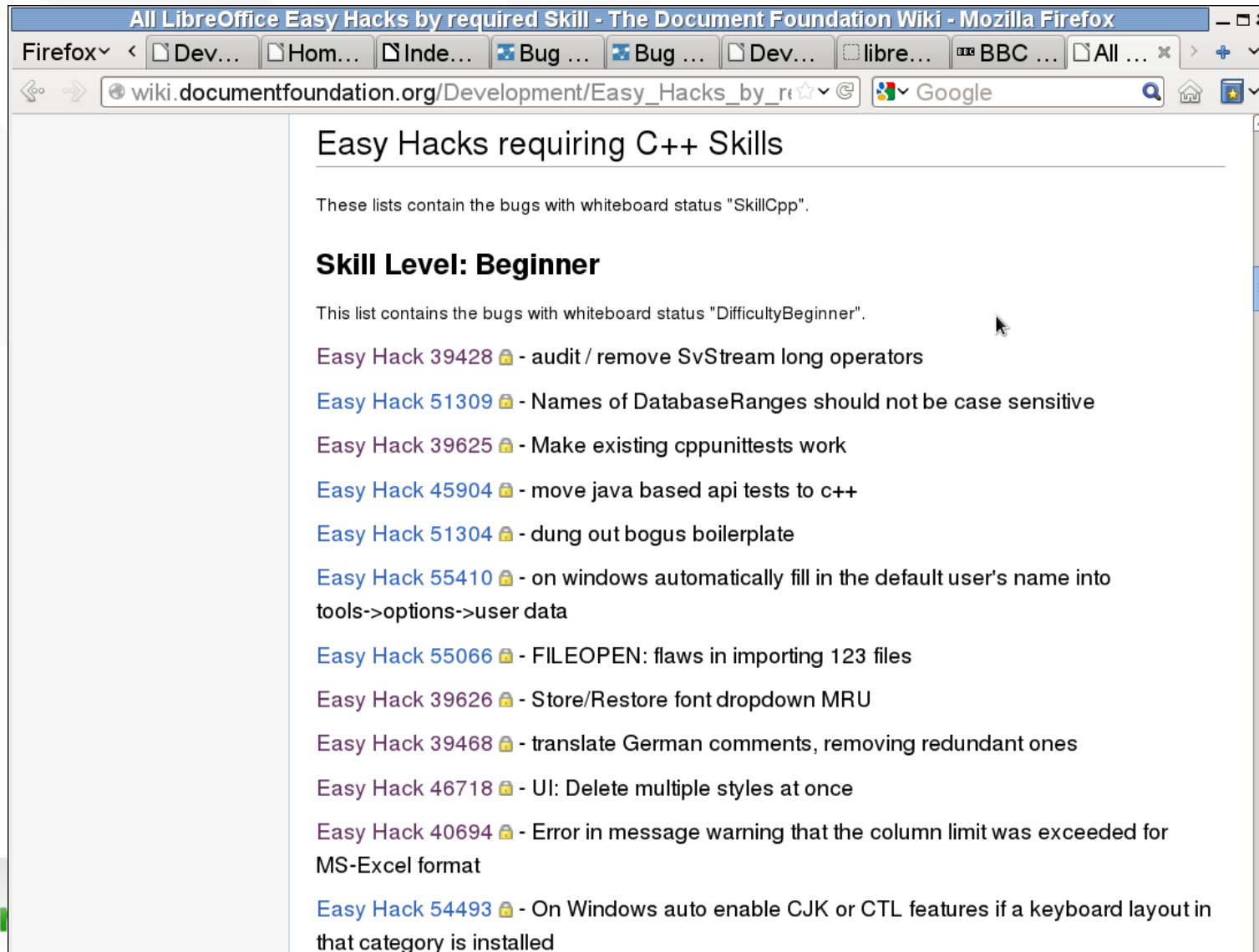
How to get easy hacks created ...

Easy: To create your own easy hacks ...

- ▼ Head to bugzilla:
 - ▼ https://bugs.freedesktop.org/enter_bug.cgi?product=LibreOffice
- ▼ Summary: “EasyHack:
- ▼ Component: “LibreOffice” or ...
- ▼ Description:
 - ▼ a **clear** set of code pointers
 - ▼ Enough detail to jump **immediately** into the code / task
 - ▼ ie. do the leg-work, a good EasyHack takes time to file.
- ▼ [Submit]
- ▼ **One more step:**
 - ▼ Add Whiteboard: see [list of names](#) or just use:
 - ▼ EasyHack,DifficultyBeginner,SkillCpp,TopicCleanup

Grok the website ... lots more out there ...

- ▼ If you want help matching you with an issue:



All LibreOffice Easy Hacks by required Skill - The Document Foundation Wiki - Mozilla Firefox

Firefox < Dev... Hom... Inde... Bug ... Bug ... Dev... libre... BBC ... All ... x > + v

wiki.documentfoundation.org/Development/Easy_Hacks_by_re Google

Easy Hacks requiring C++ Skills

These lists contain the bugs with whiteboard status "SkillCpp".

Skill Level: Beginner

This list contains the bugs with whiteboard status "DifficultyBeginner".

- [Easy Hack 39428](#) - audit / remove SvStream long operators
- [Easy Hack 51309](#) - Names of DatabaseRanges should not be case sensitive
- [Easy Hack 39625](#) - Make existing cppunittests work
- [Easy Hack 45904](#) - move java based api tests to c++
- [Easy Hack 51304](#) - dung out bogus boilerplate
- [Easy Hack 55410](#) - on windows automatically fill in the default user's name into tools->options->user data
- [Easy Hack 55066](#) - FILEOPEN: flaws in importing 123 files
- [Easy Hack 39626](#) - Store/Restore font dropdown MRU
- [Easy Hack 39468](#) - translate German comments, removing redundant ones
- [Easy Hack 46718](#) - UI: Delete multiple styles at once
- [Easy Hack 40694](#) - Error in message warning that the column limit was exceeded for MS-Excel format
- [Easy Hack 54493](#) - On Windows auto enable CJK or CTL features if a keyboard layout in that category is installed

Easy Hacks are Easy & Useful ... Come and see me to get setup ...

- You can do them ...
- Please do get involved and help us ...

Oh, that my words were recorded, that they were written on a scroll, that they were inscribed with an iron tool on lead, or engraved in rock for ever! I know that my Redeemer lives, and that in the end he will stand upon the earth. And though this body has been destroyed yet in my flesh I will see God, I myself will see him, with my own eyes - I and not another. How my heart yearns within me. - Job 19: 23-27



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