Patch Excel: Date Conversion (1900/1904 Bases)

by Guillôme

To read first

This little document is to allow you to fully benefit from advantages of my macro. It is important to read it. This document is an adaptation of a French notice, so sorry in advance for the quality of my English! This document is about version 0.9.5 issued in November 2004.

This add-in has been test to avoid any problem with Microsoft Excel and to guarantee a conversion without error. However, this software is FREE and consequently, no guarantee in anyway can be given. You accept to use this software to your own risk and responsibility. Don't use this software before to check if it is suitable to your needs. Don't use it in automatic mode before to care about potentials incompatibility.

For your information, this add-in is able to convert, in the worst case, more than 1 000 cells per second on a G4/733/640Mo and more than 10 000 cells per second on an Athlon 24000 (I guess Excel API on PC are more faster than API Mac ;-)).

How to install it?

I AM NOT SURE AT ALL ABOUT FOLLOWING INSTRUCTIONS BECAUSE I DON'T HAVE AN ENGLISH SYSTEM TO TEST. I WILL UPDATE THIS SECTION AS SOON AS I WILL HAVE MORE INFORMATION.

Mac

Just move the .xla file in the Macro library folder located in :
Applications:Microsoft Office X:Office

At the start of the application Excel, Go in menu Tools -> Additional Macro …
Then in the Add-in list, check the macro Date_EN_.0.9.x.xla, then click on Ok.

Automatically, you will get a new sub-menu "Conversion" in the menu "Format" and to additional buttons in Format bar. Go in section « How does it work? » for more information.

PC

Just move the .xla file in the Macro library folder located in :

C:\Documents and Settings**YOUR_ACCOUNT**\Application Data\Microsoft\Additionnal Macros

OR

C:\Program Files\Microsoft Office 2000\Office\Macrolib

Anyway, you can also let the .xla file where you want and load it directly from the additional macro menu in Excel by choosing "Select location"!

This add-in, really useful?

Yes, to solve a compatibility issue between date format used on PC and MAC.

Know issued on Excel :
- Impossibility to copy/paste data between workbook with different base date without alter date!
- Impossibility to modify the base date of a workbook without make a shift of 4 years on data
- Impossibility to link workbook with different base date without errors
- Impossibility to easily fix a starting workbook in the base of your choice

This add-in solves ALL theses issues !

Also, this add-in allows you to get a visual indicator to always know if you are consulting a workbook in base 1900 or in base 1904!

A problem known by Microsoft but never solved in new version of Office

(Please see http://support.microsoft.com/kb/180162)

Problems Linking and Copying Dates Between Workbooks

If two workbooks use different date systems, you may encounter problems when you link or copy dates between workbooks. Specifically, the dates may be shifted by four years and one day.

To see an example of this behavior, follow these steps:

1. In Microsoft Excel, create two new workbooks (Book1 and Book2).
2. Use the steps in the "Setting the Date System for a Workbook" section to use the 1900 date system in Book 1. Use the 1904 date system in Book2.
3. In Book1, enter the date July 5, 1998.
4. Select the cell that contains the date, and click **Copy** on the **Edit** menu.
5. Switch to Book2, select a cell, and click **Paste** on the **Edit** menu.

   The date is pasted as July 6, 2002. Note that the date is four years and one day later than the date in step 3 because Book2 uses the 1904 date system.
6. In Book2, enter the date July 5, 1998. Select the cell that contains the date and click **Copy** on the **Edit** menu.
7. Switch to Book1, select a cell, and click **Paste** on the **Edit** menu.

The date is pasted as July 4, 1994. It has been shifted down by four years and one day because Book1 uses the 1900 date system.

The poor solution of Microsoft

Correcting Shifted Dates

If you link from or copy dates between workbooks, or if you change the date system for a workbook that already contains dates, the dates may be shifted by four years and one day. You can correct shifted dates by following these steps:

1. In an empty cell, enter the value 1462.
2. Select the cell. On the **Edit** menu, click **Copy**.
3. Select the cells that contain the shifted dates. On the **Edit** menu, click **Paste Special**.
4. In the **Paste Special** dialog box, click **Values**. Then, select either of the following option buttons.

```
Select this     If
-----------------------------------------------------------------
Add             The dates must be shifted up by four years and one
                day.

Subtract        The dates must be shifted down by four years and one
                day.
```

5. Click **OK**.

Repeat these steps until all of the shifted dates have been corrected.

If you are using a formula to link to a date in another workbook, and if the date returned by the formula is incorrect because the workbooks use different date systems, modify the formula to return the correct date, for example:

```
=[Book2]Sheet1!$A$1+1462
```

```
=[Book1]Sheet1!$A$1-1462
```

In the formulas, 1,462 is added or deleted from the date value.

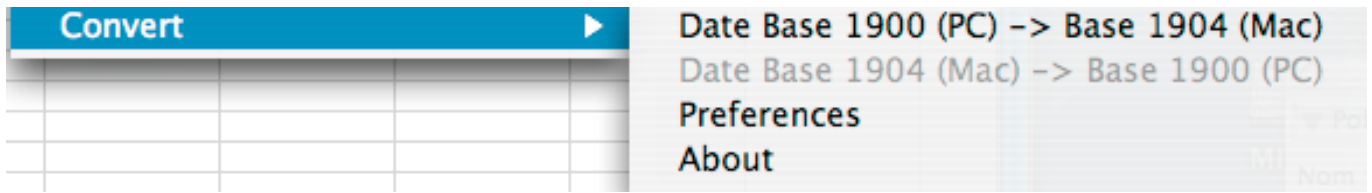## Setting the Date System for a Workbook

In Microsoft Excel, each workbook can have its own date system setting, even if multiple workbooks are open. You can set the date system for a workbook by following these steps:

1. Open or switch to the workbook.
2. On the **Tools** menu (or **Edit** menu in Excel 2001 for Mac), click **Options** or **Preferences**. Then, click the **Calculation** tab.
3. To use the 1900 date system in the workbook, click to clear the **1904 Date System** check box. To use the 1904 date system in the workbook, click to select the check box.
4. Click **OK**.

Note that if you change the date system for a workbook that already contains dates, the dates shift by four years and one day. For information about correcting shifted dates, see the "Correcting Shifted Dates" section in this article.

How does it work ?

1) **When the macro is activated, a menu « Convert » is added to menu « Format » of Excel application.**

Convert

When you click on « Date Base 1900 (PC) -> Base 1904 (Mac) », the current workbook is converted from PC format to Mac format with NO confirmation but it is always possible to not save the workbook or to do the reverse conversion.
When you click on « Date Base 1904 (Mac) -> Base 1900 (PC) », it makes the opposite.
If the choice appears in grey, it means this conversion is not possible, so it gives a way to know what it is the base of your workbook.

Preferences

Open the panel preferences. See section Preferences. Please note that all parameters are saved between two session of Excel. Only if you deactivate the macro, preferences will be lost and set by default.

About

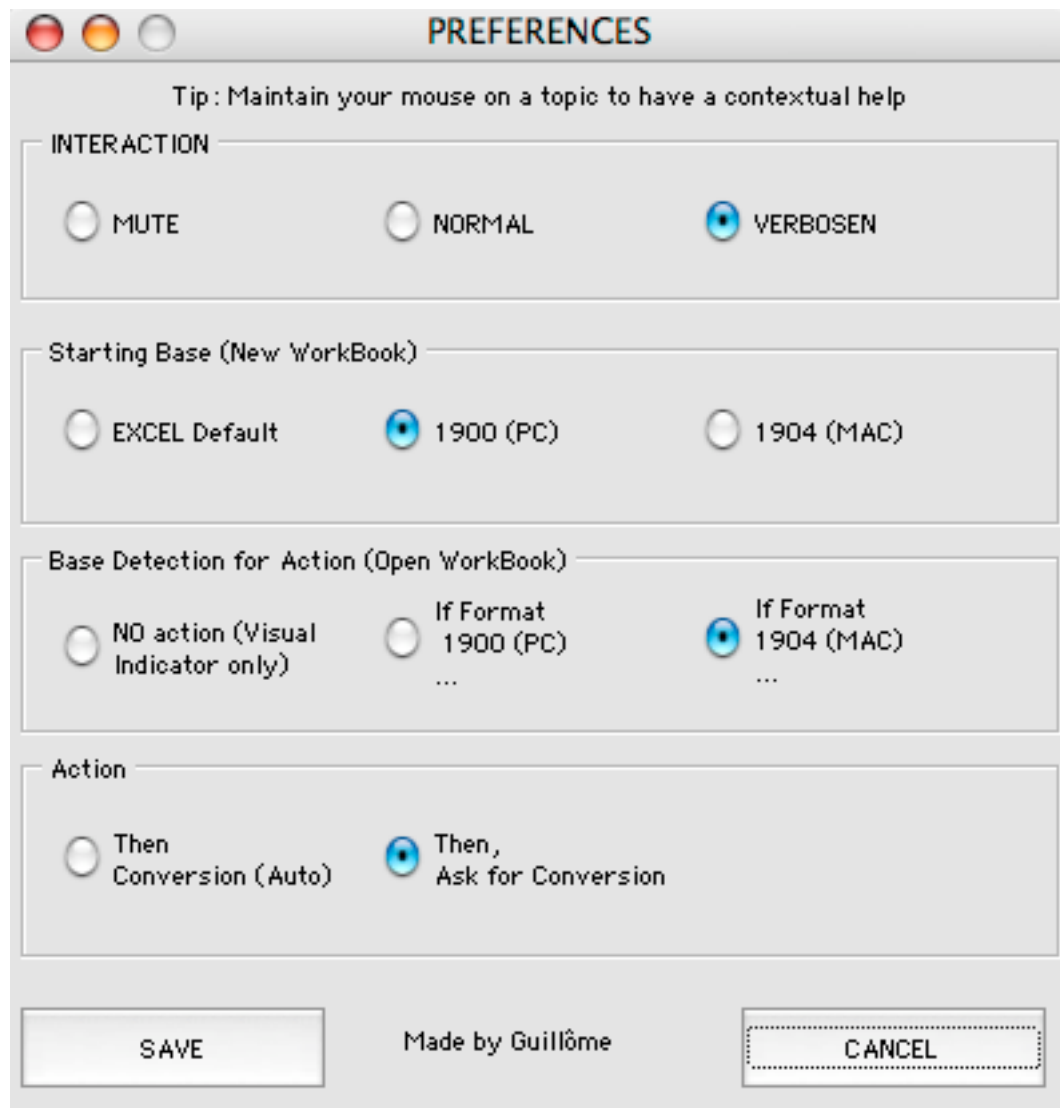Open a dialog box to give essential information, a way to contact the author and greetings.

2) **When the macro is activated, two buttons are added to the default bar (good visual indicator and faster to launch the conversion)!**

The button « Date PC -> Mac » has the same effect than the menu Format->Conversion-> Date Base 1900 (PC) -> Base 1904 (Mac).
The button « Date Mac -> PC » has the same effect than the menu Format->Conversion-> Date Base 1904 (Mac) -> Base 1900 (PC).

Preferences

Interaction

Here, you can select the number of information you request during the execution of the macro:
- VERBOSEN: Equivalent of "Debug Mode". Any action or modification will alert the user.
- NORMAL: Only error message and success message during a conversion.
- MUTE: No message if possible. If an error occurred, you will not be alert!

Starting Base

The starting base option defines the base for each new workbook in Excel:
- EXCEL Default: Visual indicator works but "New workbook" is initialized base on Excel preferences.
- 1900 (PC): Excel preferences are not considered any more for Base Date. Each new workbook will be in base 1900 (PC).
- 1904 (Mac): Excel preferences are not considered any more for Base Date. Each new workbook will be in base 1904 (MAC).

Information: On Mac or PC, base date choice is made in section "Calculation" in menu "Excel/Preferences". Check or uncheck « Calendar since 1904 ». By default, Excel on Mac initializes the new workbook in base 1904 contrary to Excel PC which always initialize in base 1900.

Base Detection

To get the fastest and easiest way to work, it is possible to automate the conversion. The macro determines for you what is the base of the workbook open and apply the action you set up!
It is a good way to convert completely a set of files from base 1904 to 1900 each time you use a workbook.
- NO ACTION: Visual indicator works but nothing happen when you open a workbook.
- If Format 1900 (PC): When you open a workbook in date base 1900, a conversion is done or proposed (see Action).
- If Format 1904 (Mac): When you open a workbook in date base 1904, a conversion is done or proposed (see Action).

Action

This panel appears only if you select a Base Detection « If format… ». In the contrary, no action is done.
- Then conversion Auto: No confirmation or dialog box, the workbook is converted automatically in the opposite base date selected in Base Detection. It is totally transparent if you are in MUTE mode.
- Then Ask for Conversion: A dialog box asks to confirm the conversion.

Known Issues

- Any modification concerning base date (1900/1904) must be done by the macro button or menus. If you use the excel preferences, visual indicator will not be in harmony with the workbook. Anyway, this will be fix automatically when you will change of workbook… It is not a big problem. No risk if you use Excel preferences.
- Dates from 01/01/1900 to 31/12/1903 are converted in text when you convert workbook from base 1900 to 1904 because these dates didn't exist in base 1904! Revert conversion will not change text in date and information on 1900 date will be lost.
- Date 29/02/1900 is converted in 28/02/1900 because 29/02/1900 doesn't exist!
- No custom location possible for menu "Convert" and button in Format Bar.
- No batch mode
- Negative hours not supported when you convert from 1904 base to 1900 base, but negative hours is never lost. If you convert again from 1900 base to 1904 base, you will get back negative hours.

History

v0.9.5:
- Readme updated in French and readme translated in "poor" English
- Fix a problem with About box
- Minor correction

v0.9.4:
- First English version
- Minor correction on dialog box

v0.9.3:
- Modify the code to allow fast translation
- About dialog box updated + minor correction
- Fix a stupid bug

v0.9.2:
- Fix a bug with PC version of Excel

v0.9.1:
- Minor correction

v0.9:
- First version