



*Cofecha* Remote Control

V1.01 – December 2004

User Manual  
Manual Revision 1.c

Made and tested for *Cofecha* version 6.06P

Also runs with *Cof12k*, the *Cofecha* version for long timespans of up to 12.000 years

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## Introduction

*Corem* is a GUI (Graphical User Interface) for the widely used *Cofecha* program for dendrochronological data analysis. It remote controls the *Cofecha* exe file and feeds the necessary user input from Windows to the DOS layer. It is based on an idea of Sturt Manning.

*Corem* **IS NOT** *Cofecha* for Windows! You still need the original *Cofecha* program in order to do something useful with *Corem*.

*Corem* itself does no calculations nor does it interpret the *Cofecha* output for you. If you are not familiar with *Cofecha* and the results you can get from this program, *Corem* won't help you out.

Still *Corem* is useful to learn about the parameters *Cofecha* offers and how they affect your results. By dramatically reducing the time to set up a *Cofecha* job *Corem* makes it much easier to do your first steps with *Cofecha*.

I made every effort to make the program waterproof and easy to use (well, at least easier than the original). Still, to remote control a DOS program even as simple as *Cofecha* and foresee every possible situation a user might run into is close to being impossible. If you run into considerable troubles please contact me.

If you like *Corem* I want to invite you to visit the SCIEM homepage at <http://www.sciem.com> and check out the other hardware and software products we offer for dendrochronologists.

## What you will need

To use *Corem* you will also need the correct version of *Cofecha*. Since *Corem* reacts to the screen output of *Cofecha* it might and might not run with different versions of the program. I programmed and tested *Corem* with **Cofecha version 6.06P**. If you have an older version, try to get this one. It is currently (nothing is as volatile as the Internet) available at

<http://www.ltrr.arizona.edu/pub/dpl/COFECHA.ZIP>

If you can't locate it there, try Henry Grissino-Mayers Ultimate Tree Ring Web pages at

<http://web.utk.edu/~grissino/software.htm>

If this still does not help, contact me at [knibbe@sciem.com](mailto:knibbe@sciem.com).

**Please note:**

Alternatively you may want to use the program *Cof12k* for long time series. I made some tests with *Cof12k* 6.06P and everything worked ok. *Cof12k* Version 6.06P can also be obtained from Henry Grissino-Mayers page at

<http://web.utk.edu/~grissino/software.htm>

If in the future the *Cofecha* software is changed, *Corem* might not understand the *Cofecha* screen output. This could result in erratic behaviour, program malfunctions or program locks. I will test *Corem* with new releases of *Cofecha*, but since I can only afford a small part of my time in the development of this program, this can take some time.

### Installation and installation troubleshooting

Installation is easy: Get the *Corem.exe* file and save it wherever you feel comfortable, even on the desktop of your PC (but don't wonder if other users won't find it then). You can create a desktop shortcut to the program easily.

It might be a good idea to copy the *Cofecha.exe* into the same directory, but this is not necessary.

When coding *Corem* I had the following things in mind: The program executable had to fit on a floppy (this explains *Corem's* "clear" user interface, if you want modern baroque, look at your XP desktop), it has to be monolithic (meaning no additional dlls, res files etc...) and it should run on any 32 bit Windows version (sorry, 16bit folks). I tested it with 98, NT, 2000 and XP and so far it works ok. The problems many inexperienced users have with Windows XP and the NTFS file format cannot be avoided in *Corem*. If you use NTFS as file system you must make sure that you have proper access credentials to the files and directories you read and write. For example, you will not be able to write to the C:\ root directory of your XP machine when logged in as a plain vanilla user.

Since *Cofecha* is a 16bit DOS program it does not understand the long file- and directory names the 32bit Windows OS offer. *Corem* will transform long file- and directory names to the short DOS compatible names (the fancy newfol~1 stuff). *Cofecha* out files can only have 8+3 DOS filenames. If you enter a long filename for the out file, the name will be truncated. Since even Microsoft distrusts it's own technology (did you ever wonder why ALL important system files and directory names in the Windows folder follow the 8+3 rule?) it might be best to keep it simple and use short directory and file names for the time being.

Do not use NetBIOS network paths (such as \\Computername\Sharename) with *Corem*! Always make sure you have all files on your local hard disk.

## Deinstallation

To deinstall the program, simply delete the *Corem.exe* file. Since *Corem* writes it's settings to the Windows registry, you might want to delete those as well. If you feel uncomfortable editing the registry, leave it alone. *Corem* stores information worth 400 bytes, so this won't break your PC. Anyway, here's where the settings are stored in the registry:

HKEY\_CURRENT\_USER/SOFTWARE/SCIEM/COREM

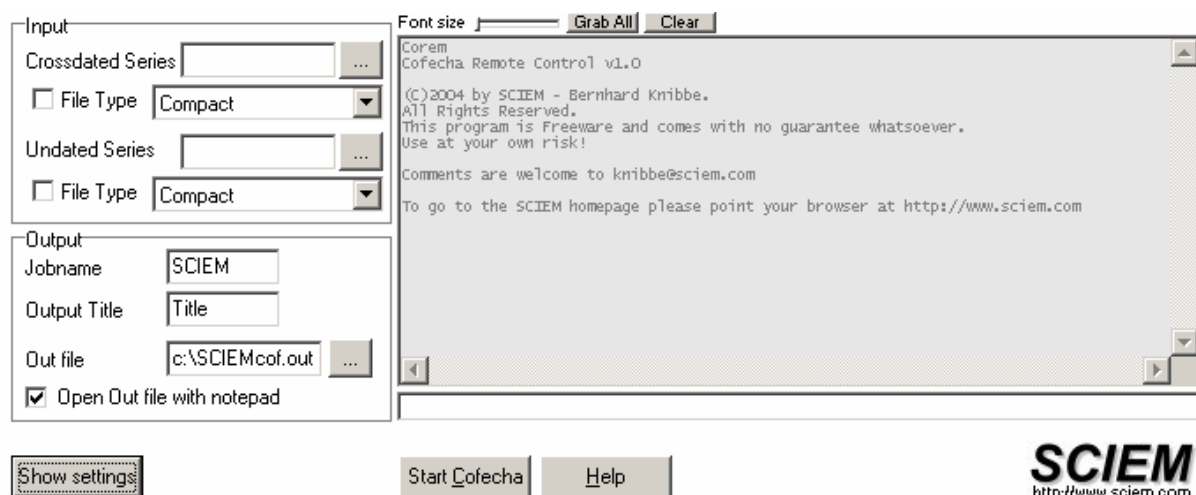
This registry path can be safely removed at every time.

## How it works

*Corem* can't do anything *Cofecha* couldn't do alone and without *Cofecha* it is plain useless. The program is a GUI that accepts the same parameters *Cofecha* accepts. It then starts *Cofecha* as a background task, grabs it's DOS output and feeds the informations you supplied as necessary to *Cofecha*. It does this a lot faster than you could ever do so you won't see much in the DOS output window as long as *Cofecha* is running. If *Corem* runs into a situation where it cannot supply useful informations to *Cofecha*, it stops. You can then try to help out manually.

To start the program click on the *Corem* desktop icon (if you created one) or launch the program with Start->RUN->PathToCoremExe\Corem.exe.

The main (and only) window of *Corem* opens:



To view the extended settings click on the button labelled **Show settings**.

<b>Parameters</b> Rigidity of spline for filtering <input type="text" value="32"/> Segment Length <input type="text" value="50"/> Lag between segments <input type="text" value="25"/> <input checked="" type="checkbox"/> Autoregressive model	<b>Output settings</b> <input checked="" type="checkbox"/> Title page, options selected, summary, <input checked="" type="checkbox"/> Histogram of time spans <input checked="" type="checkbox"/> Master series with sample depth and a <input checked="" type="checkbox"/> Bar plot of Master Dating Series <input checked="" type="checkbox"/> Correlation by segment of each series <input checked="" type="checkbox"/> Potential problems: low correlation, div <input checked="" type="checkbox"/> Descriptive statistics <input checked="" type="checkbox"/> Undated series - adjustments for highe <input type="checkbox"/> List ring measurements	<b>List undated Series best fit by</b> <input checked="" type="radio"/> Highest correlation <input type="radio"/> Adjustment
<b>Transformation</b> <input checked="" type="checkbox"/> LOG Transform series <input checked="" type="checkbox"/> Omit absent rings in correlations <input type="checkbox"/> First difference transformation <input checked="" type="checkbox"/> Include absent rings	<b>Path to Cofecha</b> <input type="text" value="c:\cofecha.exe"/> ...	<b>Save Master Dating Series</b> <input type="radio"/> Compact Format <input type="radio"/> Two Columns <input checked="" type="radio"/> Don't save
		<b>Type of correlation</b> <input checked="" type="radio"/> Pearson <input type="radio"/> Spearman Critical Level <input type="text" value="0,1234"/>

First you must tell *Corem* where it will find the *Cofecha* executable. In the section **Path to Cofecha**, click on the browse button  and locate the file *Cofecha.exe*. After the first program run *Corem* will remember this and most other user input.

In the **Input** section, enter the name and/or type of the data files you want to process. Use the browse button  to locate the files. If you do not select the **File Type** option, *Corem* and therefore *Cofecha* will assume measurement files. If this is not correct, *Cofecha* may run into considerable problems. *Corem* will not help you with problems coming from incompatible file types.

In the Output section, enter a **Job name**. A maximum of 5 characters is allowed here. Since *Cofecha* may use this name for creating the output file, you are not allowed to use the characters

\ / \* ? " < >

Also remember that *Cofecha* is a 16 bit DOS program and will not understand special characters, spaces etc...

Next enter an **Output Title** for the job. This title is used in the output summary report created by *Cofecha*.

Check the **Out file** filename. It is normally created from the job name, but you can override it.

The **Open Out file with notepad** option allows you to automatically open the *Cofecha* output report with Windows notepad after a job has finished. You can then print, save as, cut, copy etc. from the notepad.

Assuming you would like to use the default *Cofecha* settings or if you already have set the desired thresholds in earlier program runs of *Corem*, you now are ready to go. Click **Start Cofecha**.

*Corem* will launch the DOS executable.

If the program gets stuck somewhere you can try to help out manually.

To do this check the DOS screen output. Enter appropriate commandos into the bottom line below the DOS window and press Enter.



```
Corem
Cofecha Remote Control v1.0

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Comments are welcome to knibbe@sciem.com

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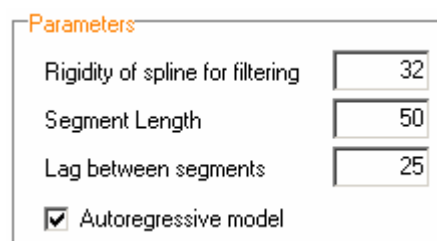
type comandos (even DOS comandos) here|
```

If for any reason nothing happens after you enter a command manually, *Cofecha* has already stopped working or responding. In this case you should check the DOS output again to find out what caused the problem (usually in or around the last line). If grave problems occur you should contact me supplying the data and settings you used and the complete contents of the DOS window (right click on the DOS screen, Select All and Copy).

You should test run the program with data you know and then analyze the output of the DOS window to get familiar of how and when the parameters are supplied to *Cofecha*.

## The Settings window

The settings you can apply here represent the same set of parameters *Cofecha* understands. Please note however, that not all parameters make sense in combination with all others. *Corem* does not check if the combined settings you supply have any meaning.



Parameters	
Rigidity of spline for filtering	32
Segment Length	50
Lag between segments	25
<input checked="" type="checkbox"/> Autoregressive model	

Set the value for **Rigidity of spline for filtering**. Normally, the supplied value of 32 will work fine. Set a value of -1 if you do not want to use any spline or regression whatsoever. If you select low positive values, *Cofecha* asks you if you want use the Autoregressive model. *Corem* overwrites this and always uses the setting you enter in **Autoregressive model**.

Set the **Segment Length** and **Lag between segments** length. The Lag between segments value should be smaller than the Segment length value, but *Cofecha* won't check this.

Transformation

- ☒ LOG Transform series
- ☒ Omit absent rings in correlations
- ☐ First difference transformation
- ☒ Include absent rings

Check **Log Transform series** to calculate logarithmic series from the original data.

Check if you want to **Omit absent rings in correlations**.

Finally, select if you want to **Transform** the data by first difference by checking/unchecking **First difference transformation**.

Output settings

- ☒ Title page, options selected, summary,
- ☒ Histogram of time spans
- ☒ Master series with sample depth and a
- ☒ Bar plot of Master Dating Series
- ☒ Correlation by segment of each series
- ☒ Potential problems: low correlation, div
- ☒ Descriptive statistics
- ☒ Undated series - adjustments for highe
- ☐ List ring measurements

In the Output section, choose the parts of the report that will be created. This is the same as the 12345678 parameter of *Cofecha*.

List undated Series best fit by

- ☒ Highest correlation
- ☐ Adjustment

Save Master Dating Series

- ☐ Compact Format
- ☐ Two Columns
- ☒ Don't save

Type of correlation

- ☒ Pearson ☐ Spearman

Critical Level

If you select both an undated and a crossdated series you can select the list order in the *Cofecha* output report by checking the adequate option in **List undated Series best fit by**.

In **Save Master Dating Series**, decide which format you want to use for saving a master (if at all).

Finally, select the **Type of correlation** (Pearson or Spearman) and the confidence level for the correlation.

If you close *Corem*, all parameters will be stored in the registry so they will be available immediately at the next program startup. If the need arises I will add a function to store different sets of parameters in external files.

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