

Mr. Liu has tried various ways to improve my “Makefile”s . I included his comments. It failed on my windows machine but feel free to try.

I also suggest the following changes of you .bahsrc file in your user folder, in my case “Etienne”.

```
alias mad='/home/Etienne/MAD-X/build/madx64.exe'  
alias madx=mad  
alias cdmad='cd /home/Etienne/MAD-X/files_for_cas'  
alias cdptc='cd /home/Etienne/ptc_alone'  
alias cdsmall='cd /home/Etienne/small_code'  
alias cdlecture='cd /home/Etienne/lecture'  
alias ptcgui='/home/Etienne/ptc_alone/interface_for_windows/ptcgui.exe'
```

1) If you have a new PTC (first time you run)

**First copy the new PTC in
..\MAD-X\libs\ptc\src**

Recompile MAD-X

2) This program uses first a mad-x lattice

Unzip mad_small_3nux.zip

and it will produce a folder **small_3nux**

a) run mad-x in it. Myself, I defined the following command in my .bashrc file of my directory (Etienne)
alias mad='/home/Etienne/MAD-X/build/madx64.exe'

So I can run MAD-X with the command:
mad < lat_exercise.h

You should produce two flat files.

3)

Then unzip ptc_small_3nux.zip
This is a “ptc stand alone” project.

In the main program change the location of the two flat files to your location in

```
call read_lattice_append(M_U, '.....\flat_exercise0.txt')  
call read_lattice_append(M_U, '.....\flat_exercise.txt')
```

Look at the program and run it.

4) You can use my graphical interface. Download

graphical_interface_for_windows.zip.

I urge you to change your .bashrc file as follows:

Add the following lines at the bottom with Etienne replaced with the appropriate user.

```
alias ptcgui='/home/Etienne/ptc_alone/interface_for_windows/ptcgui.exe'
```

Then add some lines to your registry using some utilities of Windows

Control Panel - System (or System & Maintenance - System) - Advanced system settings and click on the Environment Variables button.

Under System Variables: Click on New and enter: GINO

Click on Value and enter: <gino installation dir> for example the exact location of interface_for_windows

Then click on the PATH environment variable and click on Edit...

Add <gino installation dir> ; again for example interface_for_windows

It is particularly easy on Windows 10.