

Mach3 Plugin Rev3 to Rev4 Conversion Guide (Draft)

Introduction:

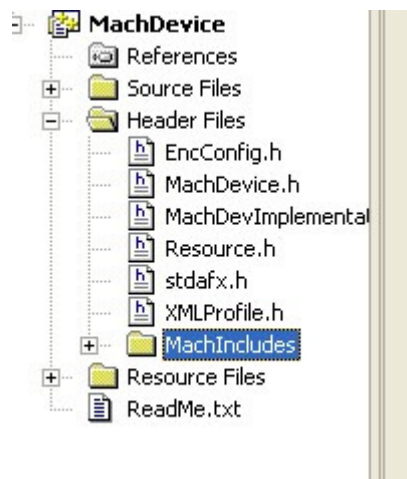
This is a guide designed to help with converting a Rev3 plugin to use the new Re4 interface structure. The new Rev4 interface has converted most of the data into pointers. This was done so the size of the classes in Mach3 can be changed and old variables deleted in Mach3 without affecting the plugins. Also this will allow other versions of VS to be used to make plugins. The future of the plugin interface will swap from shared data to methods and callbacks over time to help automate the interfacing process, but the new rev 4 structure will be kept in place as a sort of legacy mode for old plugins and as a tool to look into Mach3 Vars. This guide is going to assume you have a limited knowledge of VS2003 .

Instructions:

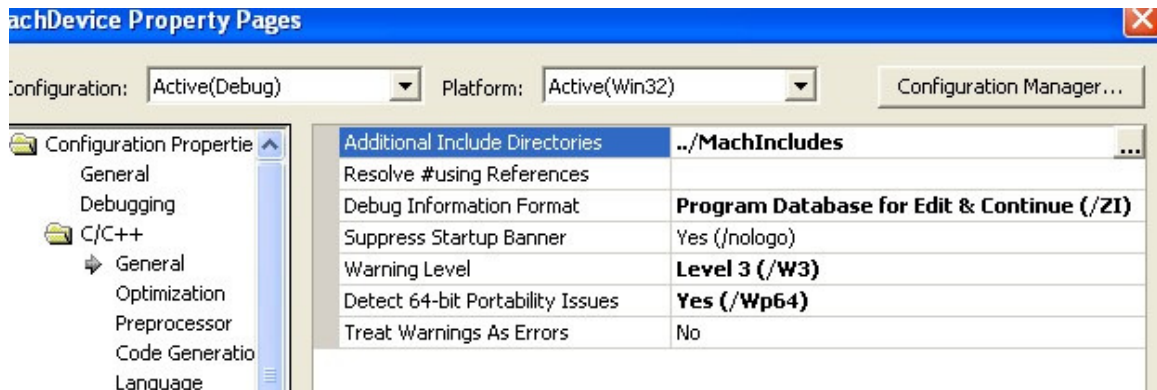
The instructions in this guide are in order of which they should be done and will have the title of what they are effect.

Removing the Old header files:

The first step is to take out the trash! The 100's of header files are no longer needed (there may not be 100's but it sure feels it!). Delete the MachIncludes folder from the "Header Files". You can simply right click and say remove



The next step is to remove the MachIncludes folder from the properties dialog (Project/Properties) . Delete the “../MachIncludes” from the Additional Include Directories and don’t forget to do Release as well!



The last step is to remove all instances of the following #include’s from your project :

`#include "TrajectoryControl.h"`

`#include "Mach4View.h"`

`#include "rs274ngc.h"`

I used the Replace function in VS2003 to do this

Adding the New Header File:

The structures are in a new file called “Mach3_Interface_r4.h” This header file should be copied into the directory with all the other header files for your project. To include this into your project you right click on the “Header Files” in the Solution Explorer and say Add -> Add Existing Item and select the Mach3_Interface_r4.h .

With all the old junk out you need to put in the `#include Mach3_Interface_r4.h` in any .cpp you have Mainplanner, _setup or MachView .

Adding the new Structures:

Removing the old Pointers and putting in the new one:
The pointers that we will be taking out are the following:

```
TrajectoryControl *MainPlanner;  
CMach4View *MachView;  
setup *_setup;
```

They are replaced with the following :

```
Externalstruct *Interface;
```

Macros are in the Mach3_Interface_r4.h that will point all the calls to _setup, MainPlanner and MachView to the Interface structure. 95% of the vars have the same name as the old Rev 3 interface. Spindle, Encoder, and MPG are the vars that have been changed to better reflect their use. Encoders are in a Struct called Encoder, MPG is in MPG and all Spindle vars start with Spin_.

Changing to pointers:

All places that you have MainPlanner-> will need to be changed to *MainPlanner-> (also _setup to *setup). The reason for this is that you are getting the data that the pointer is pointing to rather than the address of the location of the data. MachView is the only one that has a few exceptions. Any dialogs that you make with MachView as the parent need to be changed to MachView->ParentPt. This will allow dialogs to be made with Mach3's CWin* as the parent Window.

Vars that are not the Same:

As I stated earlier in this doc the Spindle Encoders and MPGs have all been changed from their original Rev3 names. MPG[<Var> and Encoder.<Var> should get you all the MPG and Encoder vars that you need. The Spindle Vars all start with Spin_. This should allow you a nice simple way to find the Var you are looking for.

Finished!

Well if you made it this far you should be done. If you find any major stumbling blocks please feel free to contact me and I will see what I can do to add more documentation to clear up the confusion.