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Subject: Strange Architecture

Posted by [Xemuth](#) on Tue, 16 Jul 2019 10:34:46 GMT

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Hello Everyone,

with friends we are working on a projet made with Upp ! let me quickly explain it :

SmartUppBot is a bot made for discord programmed in C++ using Upp and jjacksonRIAB discord package ( <https://www.ultimatepp.org/forums/index.php?t=usrinfo&id=1150>&)

Since we are many to work on and the objective was to learn Upp/C++, I have made a "SmartUppBot" package contening my SmartUppBot class and a mother class named "DiscordModule".

The main idea was, everyone who would like to work on the project would have to made a new package and inherite my mother class on is package. THEN I just have to create an instance of the inherited class and add it to SmartUppBot.

Let me show you :

```
#include <Core/Core.h>
#include "SmartBotUpp.h"

#include <Discord_Overwatch/Discord_Overwatch.h>
#include <EasyConfiguration/EasyConfiguration.h>
#include <Discord_Minecraft/Discord_Minecraft.h>
#include <Discord_RNG/Discord_RNG.h>
#include <GraphBuilder/GraphBuilder.h>
using namespace Upp;
//Module OverWatch : https://github.com/Xemuth/Discord_Overwatch
//Module Minecraft : https://github.com/Xemuth/Discord_Minecraft
//Module RNG : https://github.com/Xemuth/Discord_RNG
//Module GraphBuilder : https://github.com/Xemuth/GraphBuilder
//EasyConfiguration : https://github.com/Xemuth/EasyConfiguration

CONSOLE_APP_MAIN {
    StdLogSetup(LOG_COUT|LOG_FILE);
    EasyConfiguration ez(R"(C:/discordTokens.txt)");
    if(ez.GetCount() >= 2){
        SmartBotUpp mybot(ez.GetValue<String>("BotId"),ez.GetValue<String>("BotToken"));

        Discord_Overwatch ow("OverWatch","ow");
        mybot.AddModule(&ow);

        Discord_Minecraft mc("Minecraft","mc");
        mybot.AddModule(&mc);
```

```
Discord_RNG rng("RNG", "rng");
mybot.AddModule(&rng);

mybot.Launch();
}else{
    LOG( "config file is incorrect !\n");
}
}
```

As you can see every "Discord\_\*\*\*\*" is a discord module inherited from mother class. Each module have is own discord command defined "!low" ; "!rng" ; "!mc" ... and the bot just loop modules for each message send on Discord.

This architecture work well but every time someone update is module I must recompile everything on Linux and send it to my RaspberryPi.  
That's why I was wondering if it was possible to do something like this :

Is it possible to compile modules as Dll (or linux equivalent)  
and Programme SmartUpBot to allowing it to "hot load" dll located on a file and use it ?  
if yes. Do this system have a limit ? is it a good way to do "clean" programme ?

Thanks for the time you taken to read this.

Best regard.

Xemuth

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