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Adding UCI Engines to Fritz10

I occasionally receive e-mail inquiries about the installation of UCI engines in the *Fritz* interface, and given that it has been a couple of years since this topic was first addressed in this column, I've decided to revisit the topic, as my predecessor omitted a few details of a bit more technical nature. This month's column won't be *highly* technical (you don't need to be a programmer to benefit from it), but it could be a bit much for the more casual computer user. At a minimum you'll need to understand the basic data structure of a computer (files, folders, drives) and a tiny bit about file formats to follow along.

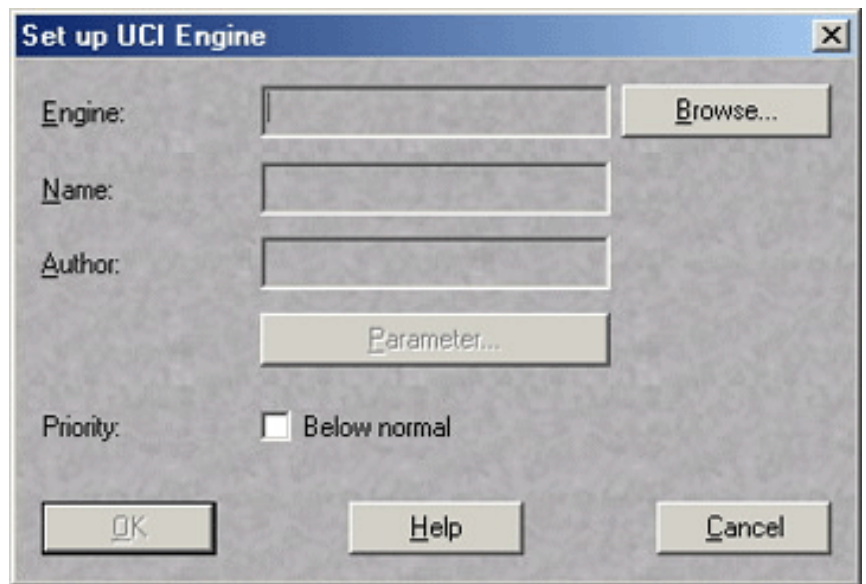
First off, *UCI* stands for *Universal Chess Interface*. It's a protocol (a set of rules) for writing a computer chess engine that can be used within multiple interfaces. Basically, such an engine can be "plugged in" and used in a variety of software. This has some benefits to both the programmer and the end user. A programmer can concentrate on writing code for the engine without worrying about programming a detailed interface (chessboard, pieces, menu commands, etc.), while the end user can run the engine within an interface that he's already familiar with, instead of being required to learn a new set of menu commands, etc.

To install a UCI engine into the *Fritz* interface, you'll of course need a chess engine that conforms to the UCI protocol. There are a number of freeware UCI engines available online; an Internet search for "UCI chess engine" will turn up several sites of interest. Most of these downloads will be in zip format. Download the file to your hard drive, and then unzip the files (using a utility program) into the folder of your choice. *Please remember the path of the folder into which you unzip the files*, you'll need to know this in a later step. The choice is up to you; the *ChessProgram* (*Fritz*) interface will access the chess engine from any folder on any drive. However, if you later delete that folder or move its contents to a different folder, the interface will no longer be able to find the engine and said engine will no longer operate within the *Fritz* interface.

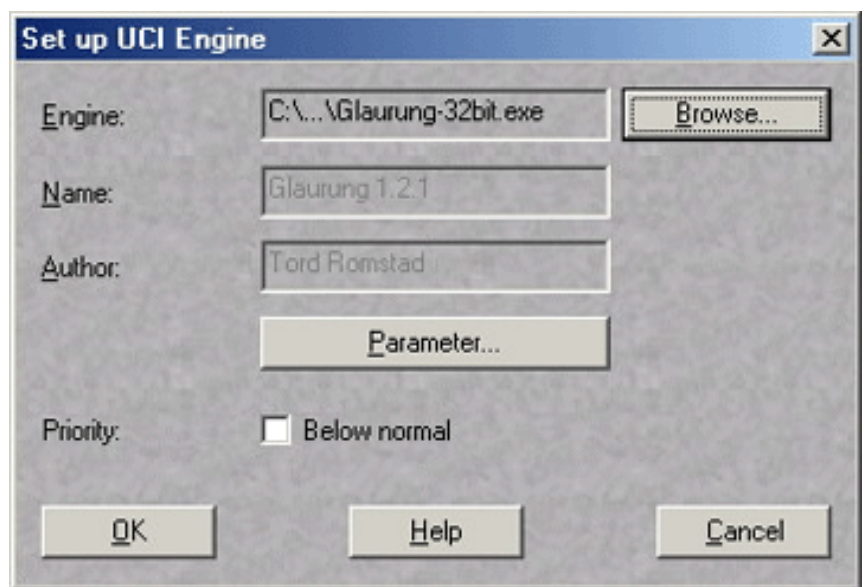
For purposes of this column, I've downloaded a chess engine called *Glaurung* (programmed by a fellow named Tord Romstad) to my hard drive and unzipped the files. Since I don't want to have to keep track of a separate engine folder stored in some random place on my drive (see the previous paragraph), I've saved the contents of the zip file into C:\Program Files\ChessBase\Engines\UCI\Glaurung121.

If you look at the contents of the folder into which you unzipped the files, you will see at least one executable (.exe) file contained therein. This will be the chess engine file. (In the case of *Glaurung*, the programmer has included multiple .exe files corresponding to different processing chips. If this is the case with the engine you've downloaded, consult any accompanying documentation (.txt or .doc files) or the Web page where you downloaded it.

Launch *Fritz10*, go to the Engine menu, and select "Create UCI engine." The following dialogue will appear:



Click the “Browse” button and navigate to the folder into which you saved the .exe file for the UCI chess engine. Click once on the name of the .exe file to highlight it, and then click “Open.” You will see the “Create UCI engine” dialogue change to reflect this new information:



The engine filename (and the abbreviated path to it) now appear in the “Engine” box. You’ll notice that (in most cases, if the programmer has strictly followed the UCI protocol) the programmer’s name and the name (and version number) of the chess engine are automatically filled into the proper fields. Don’t worry about the “Parameter” button right now, we’ll return to it in a moment. Click “OK” and the dialogue will disappear after a moment or two. This indicates that the UCI engine is now installed and is ready for use in the *Fritz* interface. Press F3 on your keyboard to bring up the engine selection dialogue and scroll to the name of your new engine:



Click once on the engine's name to select it, and then click "OK" to load the engine.

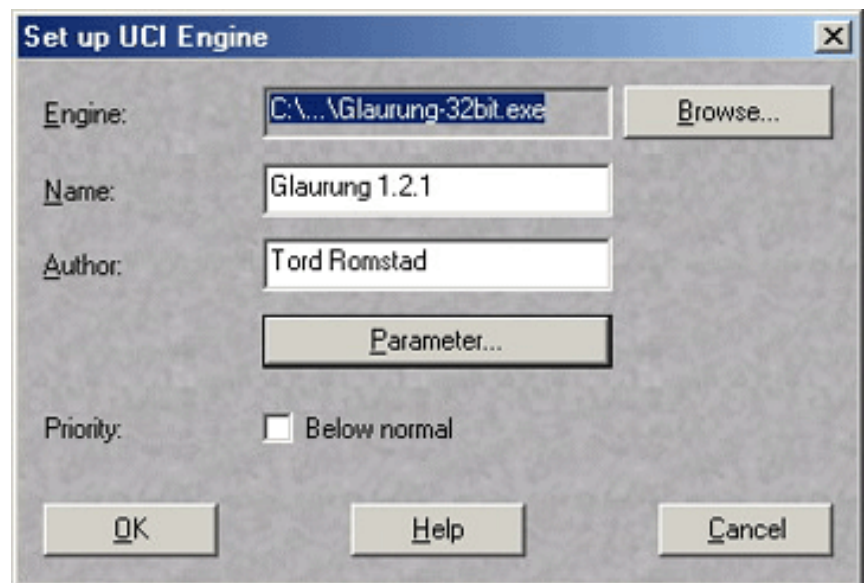
Now we've come to one of those sticky technical details that I referred to earlier. Although the *ChessProgram* (*Fritz*) interface can utilize an engine located in any folder on any drive, it creates a sort of "link" file in another folder entirely. This file serves as a form of communications between the UCI engine and the *Fritz* interface (and you'll see one use for such communications over the next few paragraphs). This file is *not* located in the same folder as the *Fritz10* engine. Instead, it's located here: C:\Windows\Application Data\ChessBase\Engines.UCI.

Some chess programmers build configurable "parameters" into their engines: a means of "tweaking" their play and performance. These are often useful for making an engine play weaker or stronger, or at least play *differently* from what you might normally expect from that engine. Although you'll usually experiment with these parameters by resetting them directly from the engine selection dialogue (press F3, then highlight the engine name and click the "Engine parameters" button), you might happen upon a set of parameters that you'd like to make handy without having to reset the engine parameters each time. You can actually create such a separately configured version of a UCI engine by installing it a second time with these "tweaked" parameters.

Let's look at an example. I've already installed Tord Romstad's *Glaurung*, but I'd like to have a second, altered version. Once again, I go to the Engine menu in *Fritz10* and select "Create UCI engine." I again click "Browse," navigate back to the folder in which I've stored *Glaurung*'s executable file, highlight it, and click "Open." I'm again returned to the "Create UCI engine" dialogue, but this time I'll click the "Parameter" button to see what kind of configurable parameters the programmer has provided:



Let's say I want to make the engine play much more passively. I lower the "Aggressiveness," "Space," and "Development" parameters and raise the "Cowardice" level. After making these changes, I click "OK" and see a change in the "Create UCI engine" dialogue:

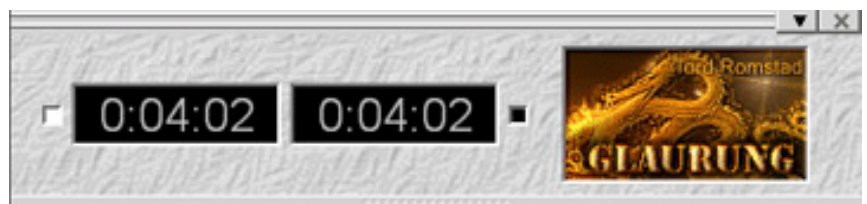


Notice that the "Name" and "Author" fields are now available to be edited. To remind myself that this engine is a "tweaked" version that I've modified, I'll change the "Author" field to "Tord Romstad/Lopez." It's *important* to modify the "Name" field, since *Fritz10* will base the "link" file's name on what you've entered in this field. I'll add the word "*Craven*" to the existing name (thus naming it "*Glaurung 1.2.1 Craven*"), after which I'll click "OK." We can now open the engine selector again to see the new version listed among the available engines:



Note that this process does *not* create a new or duplicated engine file. Instead, a new “link” file has been created in the folder C:\Windows\Application Data\ChessBase\Engines.UCI. Link files end in the extension .uci and will always be named whatever was typed in the “Name” field in the “Create UCI engine” dialogue. In the case of our example, we have just one executable engine file (Glaurung-32bit.exe), located in the folder into which I unzipped it, and two separate .uci “link” files (Glaurung 1.2.1.uci and Glaurung 1.2.1 Craven.uci), both located in the folder C:\Windows\Application Data\ChessBase\Engines.UCI.

As a final note, many UCI engines also come with a graphics file (or several such files, as is the case with *Glaurung*), and an engine “logo” that can be displayed in the chess interface. In the *Fritz* interface, right-click in the Clock pane and select “Logo,” the engine’s logo (if any) will then be displayed beside the clock(s):



If a logo file isn’t bundled in the engine’s .zip file, you can often obtain one directly from the same website that offered the engine. Logo files must be in .bmp format in order for the *Fritz* interface to use them, so right-click on the graphic, select “Save Picture As...,” change the “Save as type:” pull-down to “Bitmap (*.bmp),” then save the file directly into the same folder as the engine’s .exe file itself. Then you must change the .bmp’s filename to match that of the engine’s .exe file. In the case of *Glaurung*, the engine’s .exe file is called “Glaurung-32bit.exe,” so the logo file’s name had to be changed to “Glaurung-32bit.bmp.”

If you’re artistically inclined, you can create your own logo files. The only restrictions are that the graphic has to be saved in .bmp format and can be no larger than 100 x 50

pixels. Just remember that the logo has to share the engine's filename and must be located in the same folder as the engine's .exe file.

Armed with the information contained in this column, you can greatly expand your stable of chess engines. Every chess engine plays in a slightly different style, and with the ability to create alternative engines using tweaked parameters, you can have a near-infinite number of chessplaying opponents, analysts, and partners from which to choose.

Until next month, have fun!

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All the ChessBase software described by Steve in this column, as well as many more ChessBase programs, are available in the [ChessCafe Online Catalog](#).

Steve wants your questions!! Send it along and perhaps it will be answered in an upcoming column. Please include your name and country of residence. [Yes, I have a question for Steve!](#)

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