
Subject: Re: ENVI menus, programmatically.
Posted by [Robert Moss](#) on Tue, 16 Mar 2004 22:25:26 GMT
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Peter Mason wrote:

> Robert Moss wrote:

>

>> Does anyone here know the trick to programmatically adding menu items
>> to ENVI? Yes, I have "googled" on this topic, and found one instance
>> that looked promising, but it doesn't really answer the question.
>> Clearly there is a way to do it... and it appears to involve creating
>> a procedure that has one parameter which is a data structure that
>> defines the menu structure. What happens inside this routine, or what
>> undocumented programs it may call, or what undocumented program call
>> it, is non-obvious. Any takers?

>>

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>

>

> I wish that RSI would get on with it and document this interface as it is
> very useful. IMHO, they under-estimate the nuisance factor involved in the
> traditional route of editing the menu file. Even if you give
> copy-and-paste instructions to your users, it's still a nuisance as they
> have to find the envi.men file, overcome the geek factor, and so on. Most
> ENVI users can't be having with this sort of run-around. (Other sorts,
> sure, but not this one :-))
> Whereas.

> I sort-of found out how this interface works a good few years ago and use it
> routinely. *It has been stable for a number of ENVI versions.* In the
> interests of motivating some genuine documentation, here's what I know:

>

> The system only kicks in if your file (.PRO or .SAV) is in ENVI's SAVE_ADD
> subdirectory.

>

> The action is in a special procedure that you write. This procedure is
> named after the .PRO or .SAV file that it's in: filename_define_buttons.
> For example, if the host file was called QWERTY.PRO or QWERTY.SAV then you
> would name your procedure: QWERTY_DEFINE_BUTTONS

>

> The procedure has one positional parameter. Call it B. So:

> pro qwerty_define_buttons, B

> I think that stuff can come in via B sometimes but have never worked out how
> to deal with that. What I know is that you can define B from scratch with
> just your own menu additions and - if you do it right - these additions will
> find their way into the ENVI menu.

>

> B is an array of structures, one element per item (node or leaf) of your
 > menu additions. The structure definition is un-named, I think, and it
 > looks like this:
 > { parent:"", sibling:"", name:"", uvalue:"", event_handler:"",
 > separator:0, display:0 }
 > Straight away, you can see that it's a lot like an entry in the envi.men
 > file.
 > Anyway, for a given element in this structure array:
 > Set PARENT to the name of an existing node under which to add this entry, or
 > set it to an empty string to add this entry as a top-level item in the ENVI
 > menu.
 > Set SIBLING to the name of an existing node/leaf if you want this entry to
 > appear just after it, or set it to an empty string to make this entry "go at
 > the end".
 > Set NAME to what you would like to call this node/leaf in the ENVI menu.
 > Leave the other members empty/zero if this entry is a node. If it is a
 > leaf (a module invocation) then continue...
 > Set UVALUE to anything you like. (I don't use this item myself and don't
 > know what it's for.)
 > Set EVENT_HANDLER to the name of your module's top-level procedure (the same
 > one that you would have specified in envi.men)
 > I think that SEPARATOR gives you one of those menu partition things. I
 > haven't used it.
 > I think that DISPLAY, if set non-zero, might add your item to the display
 > menu rather than the main menu. I haven't used it - I've always left it
 > zero to add to the main menu.
 >
 > That's about it. You simply set up a structure array and return it.
 > When ENVI starts, it goes looking in SAVE_ADD, restoring or compiling
 > modules that it finds there. For each module, it'll look for a
 > ..._DEFINE_BUTTONS procedure and it'll run it if found.
 > What I don't know is how to get some interaction going if you have more than
 > one module that's trying to add menus. i.e., If they share a common root
 > node but it's a node that must be created, which one should have the
 > honours? The trouble is that ENVI appears to discover files (in SAVE_ADD)
 > according to some lower-level file-system thing rather than alphabetically,
 > so you can't count on a discovery order. (I just try to avoid this
 > situation by combining related modules into one .SAV file and having one
 > DEFINE_BUTTONS procedure for the lot.)
 >
 > HTH
 > Peter Mason
 >
 >

Thanks, Peter. You've made my life a little easier.

R
