PTXdist Application Note

Extending the Menu

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Pengutronix.

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Background

Whenever we call the `ptxdist menuconfig` command it searches in the active project for the file `Kconfig`. If it's not present, it uses the global one from the PTXdist installation directory. If one is present it will be used **instead** of the global one. With this feature we could replace the whole menu by our own one. But most of the time we only need some extensions and no replacement.

To extend the menu on a per project base we should add additional menu files into our local `rules/` directory. We can place these files anywhere we like, but the recommended location is the local `rules/` directory. PTXdist supports some keywords to always find this directory even if we move the active project folder.

Creating a new menu entry

First we need a *menu file* to describe the new menu entry. We start our favoured editor and create the file `rules/my_extension.in` in our active project. This should be its content:

```
config MY_EXTENSION
bool
prompt "My Extension"
help
  Here I can select my own extension. Hello world!
```

This will be a very simple menu entry. It's of type `bool` which means we will see a check box: A user can select if he wants to use this extension (whatever it does!) or not.

The prompt of this entry we will see later will be *My Extension*. If someone requests help for this entry, one will see *Here I can select my own extension. Hello world!*.

Note: The config variable (here *MY_EXTENSION*) must be unique. It will be used by the build mechanism!

For further details about keywords and syntax of the kconfig-language please refer **Documentation/kbuild/kconfig-language.txt** in the Linux kernel sources.

How to Extend

To simplify this menu extension PTXdist comes with a template to be used as a starting point. We are copying this file into our active project:

`$ cp <ptxdist-installdir>/rules/templates/kconfig/Kconfig .`

Note: Replace `<ptxdist-installdir>` with the path to your PTXdist installation.

As a first step this template does not change anything unless we modify it.
So if we start PTXdist's configuration at this point of time, we will see the same menu entries as before due to the expression `source "config/Kconfig"`. This will continue to use the standard menu definition from PTXdist's installation.

To get PTXdist to extend its menu with this new menu file, we simply add this line at the end of the local `Kconfig` file:

`source "workspace/rules/my_extension.in"`

Note: `workspace` is not a real directory name. It's only a keyword to let PTXdist know this file is located in the active project instead of global installation. Instead of the `workspace` keyword we could also use the absolute path to this file. But it will crash if the active project will have been moved in the filesystem.

That's all. Whenever we run the `ptxdist menuconfig` now we see on top PTXdist's regular menu and at bottom our extension. It depends on the content in `my_extension.in` what menu entries we will see (or **not** see, if there is no *prompt* keyword in it).

A last note: Whenever we change the menu content we must run `ptxdist menuconfig` and save the new configuration at least one time. Alternatively we can run `ptxdist oldconfig` instead to make the new symbols valid.

Additional questions?

Below a list of locations where you can get help in case of trouble or questions how to do something special within PTXdist or general questions about Linux in the embedded world.

Mailing Lists

About PTXdist in special

This is an english language public mailing list for questions about PTXdist. See web site

http://www.pengutronix.de/mailinglists/index_en.html

how to subscribe to this list. If you want to search through the mailing list archive, visit

http://www.mail-archive.com/

and search for the list *ptxdist*.

About embedded Linux in general

This is a german language public mailing list for general questions about Linux in embedded environments. See web site

http://www.pengutronix.de/mailinglists/index_de.html

how to subscribe to this list. Note: You also can send english language mails.

News Groups

About Linux in embedded environments

This is an english language news group for general questions about Linux in embedded environments.

comp.os.linux.embedded

About general Unix/Linux questions

This is a german language news group for general questions about Unix/Linux programming.

de.comp.os.unix.programming

Chat/IRC

About PTXdist in special

irc.freenode.net:6667

Create a connection to the **irc.freenode.net:6667** server and enter the chat group **#ptxdist**. This is an english language group to answer questions about PTXdist. Best time to meet somebody in there is at europeen daytime.

Miscellaneous

Online Linux Kernel Cross Reference

A powerful cross reference to be used online.

<center>http://lxr.linux.no/blurb.html</center>

U-Boot manual (partially)

Manual how to survive in an embedded environment and how to use the U-Boot on target's side

<center>http://www.denx.de/wiki/DULG</center>

Commercial Support

You can order immediate support through customer specific mailing lists, by telephone or also on site. Ask our sales representative for a price quotation for your special requirements.

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