

Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 2:31 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Peter Van der Zee wrote:

Hi Andy;

My typical approach is to keep my code very modular, hence the Code, Cons and Vars for each module together. All resides in a single assembly cog, so my typical template looks like:

[code]

```
CON
    _clkmode      = xtall + pll16x
    _xinfreq      = 5_000_000
```

```
PUB Main
    cognew(@Scheduler, 0)
```

```
'Scheduler Routine =====
CON
Pin0      = 1 &&&0
Margin    = 12
TickClocks = 400
TickuS    = TickClocks / 80
'headroom value
'set tick time to 5 usec at 80 MHz
'80 clocks per uSec
```

```
DAT
Scheduler      org      0
code
```

```
.
.
.
```

```
Var_1 long xx
```

```
,
```

```
Var_n long xx
```

```
'Application 1 =====
```

CON

con1_1 = xx

.

con1_N = xx

code

.

.

.

var1_1 long xx

.

var1_N long xx

'Application 2 =====

CON

con2_1 = xx

.

con2_N = xx

code

.

.

.

var2_1 long xx

.

var2_N long xx

ETC.

`[/code]`

But when I implement the debugger (of course with it's required parameters), the compilation on pressing F2 treats all the CONs after the first one as memory locations, and of course screws up all the addressing. To get around this I must move all the various module CONs together with the very first CON, and this can get a little messy and error prone when there are many modules, and swithing (commenting) modules in and out.

So I was hoping for the debugger be tweaked so that I could leave the CON's inside their own module.

Thanks for listening.

Cheers,

Peter (pjb)

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 1:27 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, sdenson wrote:

While you're there ... can you also make it not lock up if the propeller tool has an error and the message box from propeller tool is hidden behind a PASD window? If there is a workaround to this problem it would be useful to know.

While you're there ... can you consider other enhancements previously requested ?

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 12:59 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Ariba wrote:

pjv

Do you have CON sections inside Assembly code? Can you provide an Example code?

Several CON sections before the DAT with the Assembly code should not make any problem. I'm not sure what happens with CON after the Assembly code, need to try it.

At the moment PASD overreads all lines until it finds an ORG statement, then all the following lines are treated as Assembly code. On another ORG, parsing is stopped, to allow code for several Cogs in one file.

Andy

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 11:53 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Peter Van der Zee wrote:

Hello Andy;

Since you are into the software is it possible for you to make a tweak????

While debugging, I frequently add pre-used modules to my code or comment out modules. When doing this I like to keep the CONstants and variables for those modules right with the module code, and not group all the CONs or vars together.

Unfortunately PASD appears to only like a single CON. Any repeats of the CON directive after encountering the first one incorrectly causes memory allocations to those subsequent CON entries, and screws up the assembly addressing. So my question is: would it be possible to permit CONs at any location in the program? It would save a lot of error prone juggling of code while debugging.

This is still a fantastic tool, and I very much appreciate your creating it.

Cheers,

Peter (pjb)

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 10:06 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

Seems to work fine. Thanks Andy.

Bean

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 10:03 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Ariba wrote:

OK, here is the next version. A <WP> tag sets a watchpoint.

But this watchpoints are very experimental and not very reliable, that's why they are a bit hidden and not promoted so far.

Andy

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 8:59 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

Andy,

Okay, I understand what is happening. Yeah it would be nice if you could make it continue automatically.

I didn't see the Watchpoints, that is really cool. Could you make a tag for watchpoints also ? (like <BP> for breakpoints).

Bean

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 8:02 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, RvnPhnx wrote:

[quote="Bean"]If I set a break point inside a loop, it should stop at the break point each time I press F5 (RUN).

But it seems to do a single instruction (and says STEP at the bottom) the first time I press F5, then the next time I press F5 it does the run and stop at the break point again.

So, I end up having to press F5 TWICE for each loop. Which gets confusing.[/quote]

Alas, I must have used too many debuggers or something, as I expect this sort of behavior. Not all of them do it, but many do.

I think that it isn't always a bad thing, but it sure can be annoying if you are in a hurry. The best solution is to not be in a hurry (and to not worry about developing an RSI from hitting the F5 button too often)--as if that's comforting or anything! :devil:

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 7:57 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Ariba wrote:

Bean

thats the normal behavior of PASD. First F5 does a only a step, second continues running. The reason is that I can't continue at the Breakposition because there is this jmpret in the cogram at that position.

So I execute the original instruction as a single step from PASD and run then from next location.

Can perhaps be made automatic, like the Watchpoints which just displays the values and the continues automatically.

Andy

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 6:18 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

I don't WANT to do single steps.

If I set a break point inside a loop, it should stop at the break point each time I press F5 (RUN).

But it seems to do a single instruction (and says STEP at the bottom) the first time I press F5, then the next time I press F5 it does the run and stop at the break point again.

So, I end up having to press F5 TWICE for each loop. Which gets confusing.

Bean.

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 5:56 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, karla wrote:

If you want to do single steps in PASD you need to press <F8>

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Jim Kenney

From: TestForum@parallax.com
Sent: Friday, April 23, 2010 5:53 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, cebersp wrote:

I am sitting here mouth open....
Question was just yesterday.
Loking forward to try this.

I remain respectfully yours,
Christof

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 7:25 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

Andy,

That does put a break point on the line with the <BP>. Thanks.

But when I press F5 it does a step to the next instruction, then if I press F5 again, then it will run until it hits the break point again. I'm not sure why it does a STEP the first time ???

Bean

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 5:36 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Ariba wrote:

OK try this version of the PASD.exe

This version activates the BP checkbox, if the string pattern "<BP>" is found in a source line (normally as comment).

Andy

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 3:53 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

Andy,

It would be easier if I could just set break points with a label. Maybe any label that starts with `_BREAK_`, such as `_BREAK_1`, `_BREAK_2`, etc.

I don't know if it would be possible to pre-process the source to look for these labels and set the checkbox. Then the user could turn-off the breakpoint by un-checking the box while debugging.

If we use the `"jmpret 9,#0"` method, is there any way to make it NOT a breakpoint while debugging ?

I can output whatever makes it easiest for you. Just let me know.

Bean

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 3:48 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Ariba wrote:

Bean

Yes, normally PASD replaces the Break with the original instruction at this address, but in this case it's just again the Break, so it stucks.

For now, you can manually set the next address (select the next line and click on 'Set Address' in the menu), and then continue with F5. I will try to detect this case in a future release of PASD and skip the Break.

Andy

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 1:10 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] NEW: PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, KRauer wrote:

Shame this wasn't OSX Friendly :(

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 12:48 PM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] NEW: PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

Ariba,

Okay "jmpret 9,#0" does indeed create a break, but I cannot continue past it.

Bean

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 11:35 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] NEW: PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, Ariba wrote:

Bean

To force a Break use this instruction:

```
[code] jmpret 9,#0  
[/code]
```

This can also be made conditional.

I'm glad to hear that PropBasic will support PASD :smile:

Andy

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 9:09 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] NEW: PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

I have added support for PASD to PropBasic.

The next release will allow the following:

```
PROGRAM Start PASD
```

This will add the code need to debug with PASD.

I haven't posted this yet, I'm working on some other issues right now. But the next release will have the PASD support in it.

Bean

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 6:18 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] NEW: PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, bean wrote:

Christof,

I will look into making PropBasic compatible with PASD. I think it's a great combination too.

Bean

----- End of Message -----

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Jim Kenney

From: TestForum@parallax.com
Sent: Thursday, April 22, 2010 5:28 AM
To: jim@hoverdynamics.com
Subject: Re: [Propeller Chip] NEW: PASD - Propeller Assembly Sourcecode Debugger

In Propeller Chip, cebersp wrote:

Hi Andy,

I have successfully tried to use PASD with PropBasic. This makes a lot of sense, because everything is there, you can see the cogvariables, you can see the source text and so on. So you have a full source level debugger!

There is only one major problem: PropBasic inserts very few codes (3 longs as far as I have seen up to now) before the program text. These codes have to be deleted manually because PASD does not work, if the first longs are not PASD. I assume there are absolute addresses in these 12 Longs. If you could provide the assembler source code, one could insert this perhaps?

Christof

----- End of Message -----

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