Subject: How to know if a package is loaded
Posted by koldo on Sun, 24 Oct 2010 20:17:15 GMT
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Hello all

A simple question: How a cpp source can know if a package is loaded?

Imagine a general purpose library that includes some feature for GridCtrl package. If the programmer uses this package but s/he does not include GridCtrl, there will be a linking error.

Of course it is possible to use flags in the main package configuration but, is there another cleaner way?

Subject: Re: How to know if a package is loaded
Posted by dolik.rce on Mon, 25 Oct 2010 06:27:10 GMT
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koldo wrote on Sun, 24 October 2010 22:17Hello all

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Hi Koldo,

I'm afraid there is no direct and reliable way.

The closest you can do is probably convert the feature into template. If the user doesn't use the necessary package he shouldn't instantiate the template and everything should link just fine.

BTW: Adding this to theide would be great, I hit this issue few times too. And it should be quite simple to code, just extend the Accept field in .upp files/package manager. Let's say adding GridCtrl to Accept would cause flagGridCtrl macro to be defined if the package is used in the current project. The only problem I see is that packages using this could cause trouble with older versions of theide. But probably nothing too serious, it would just omit the extending features. Do you think I should try to implement it?

Best regards,
Honza

Subject: Re: How to know if a package is loaded

Posted by mirek on Mon, 25 Oct 2010 06:37:24 GMT
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koldo wrote on Sun, 24 October 2010 16:17How a cpp source can know if a package is loaded?

Imagine a general purpose library that includes some feature for GridCtrl package. If the programmer uses this package but s/he does not include GridCtrl, there will be a linking error.

Does not it give a nice and simple answer?

BTW, the case described above is a bug of the library - it should have add "GridCtrl" in its 'uses'.

Mirek

Subject: Re: How to know if a package is loaded
Posted by dolik.rce on Mon, 25 Oct 2010 08:00:29 GMT
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luzr wrote on Mon, 25 October 2010 08:37koldo wrote on Sun, 24 October 2010 16:17How a cpp source can know if a package is loaded?

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BTW, the case described above is a bug of the library - it should have add "GridCtrl" in its 'uses'.

Mirek

We can try to ask once more, being nicer this time

Anyway I think what Koldo meant (and me too) is that sometimes it is better to make some extension voluntary. GridCtrl is not the best example, but imagine you would like to provide some extension of the stuff in MySql package - then adding it into your package would make the whole thing unusable on computers which don't have the mysql library installed. But if you could detect if the MySql is already used, than it would be safe to use it. Otherwise, you would just #ifdef out the MySql related parts and everyone would be happy (especially linker).

Honza

Subject: Re: How to know if a package is loaded
Posted by koldo on Mon, 25 Oct 2010 10:18:44 GMT
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Yes, thank you Honza

In addition we try to link the minimum number of libraries possible. If in a project it is not necessary to use GridCtrl, I prefer not to link GridCtrl and the part of the library that interacts with it.

Subject: Re: How to know if a package is loaded
Posted by mirek on Wed, 27 Oct 2010 06:12:31 GMT
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Well, while not completely ideal, sometimes you can achieve this (or something quite related) using function pointers.

We are already doing this for Painter <-> Draw, PdfDraw <-> Report, Painter <-> Report.

Also, Image format somewhat represent this case...

Subject: Re: How to know if a package is loaded
Posted by koldo on Wed, 27 Oct 2010 14:33:57 GMT
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Hello Mirek

It is true but not useful as in those cases the packages contain subclasses and register themselves in any way when loaded, like RegisterPaintingFns__ with Draw and StreamRaster::Register with Raster .

Subject: Re: How to know if a package is loaded
Posted by mirek on Wed, 27 Oct 2010 17:34:12 GMT
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koldo wrote on Wed, 27 October 2010 10:33Hello Mirek

It is true but not useful as in those cases the packages contain subclasses and register themselves in any way when loaded, like RegisterPaintingFns__ with Draw and StreamRaster::Register with Raster .

Suggest and implement solution to the problem then

I suspect it would not be that easy I am afraid... And it would perhaps make U++ even more

dependent on theide building scheme.

Subject: Re: How to know if a package is loaded
Posted by koldo on Wed, 27 Oct 2010 20:43:37 GMT
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Hello Mirek

You are right. You have convinced me with this:
And it would perhaps make U++ even more dependent on theide building scheme.
That is a bad feature... forget about it .
