Subject: Android builder
Posted by mirek on Mon, 06 Jul 2015 09:32:36 GMT
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I am happy to announce that I have just merged experimental Android builder to TheIDE,

It is still experimental (frankly, so far I have only tested that it has not broken TheIDE , anyway according to docs, you should be now able to build android apps in TheIDE.

Note that this is only about the builder so far, no work was done on libraries yet.

Subject: Re: Android builder
Posted by koldo on Tue, 07 Jul 2015 08:40:34 GMT
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It sounds great . However, how far are we from Android application development?

Subject: Re: Android builder
Posted by mirek on Wed, 08 Jul 2015 07:19:57 GMT
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koldo wrote on Tue, 07 July 2015 10:40It sounds great . However, how far are we from Android application development?

Maybe later this year....

Subject: Re: Android builder
Posted by koldo on Wed, 08 Jul 2015 09:23:15 GMT
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More or less, what has been done and what are the components that have to be done?

Subject: Re: Android builder
Posted by mirek on Wed, 08 Jul 2015 12:46:20 GMT
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koldo wrote on Wed, 08 July 2015 11:23More or less, what has been done and what are the components that have to be done?

This is builder, it means you should be able to develop android apps (mixed Java/NDK) in TheIDE. Packages work as we are used to, being transformed into android build system

structures.

No work has been done on library yet.

Subject: Re: Android builder
Posted by koldo on Wed, 08 Jul 2015 13:56:33 GMT
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Very interesting, excellent!. Maybe in few months we will see a Hello World

Subject: Re: Android builder
Posted by Klugier on Sat, 11 Jul 2015 22:15:09 GMT
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Hello koldo,

"Hello world!" example is on the upp trunk (trunk/examples). It name is "AndroidMath".

The example is on the site. Below is links to them: (for some reasons java files are still not visible):
AndroidMath - Main package that shows how to mix Java & C++ in Android project. It also shows how android project structure works with TheIDE.
AndroidMathUtility - pure C++ supportive package.

Please notice that this example doesn't use any upp components only standard c++ library.

Moreover android builder configuration is also written. You can find it in the latest upp version (Help -> "Working with Android builder"). I wish it will be available on upp site.

Sincerely,
Klugier

Subject: Re: Android builder
Posted by koldo on Mon, 13 Jul 2015 12:15:40 GMT
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Subject: Re: Android builder
Posted by Mindtraveller on Thu, 16 Jul 2015 11:00:28 GMT
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Cool!
May be it is good idea to add Android projects to templates.

Subject: Re: Android builder
Posted by Klugier on Thu, 16 Jul 2015 13:54:07 GMT
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Hello Mindtraveller,

Application template is already implemented . Catch screen-shot:

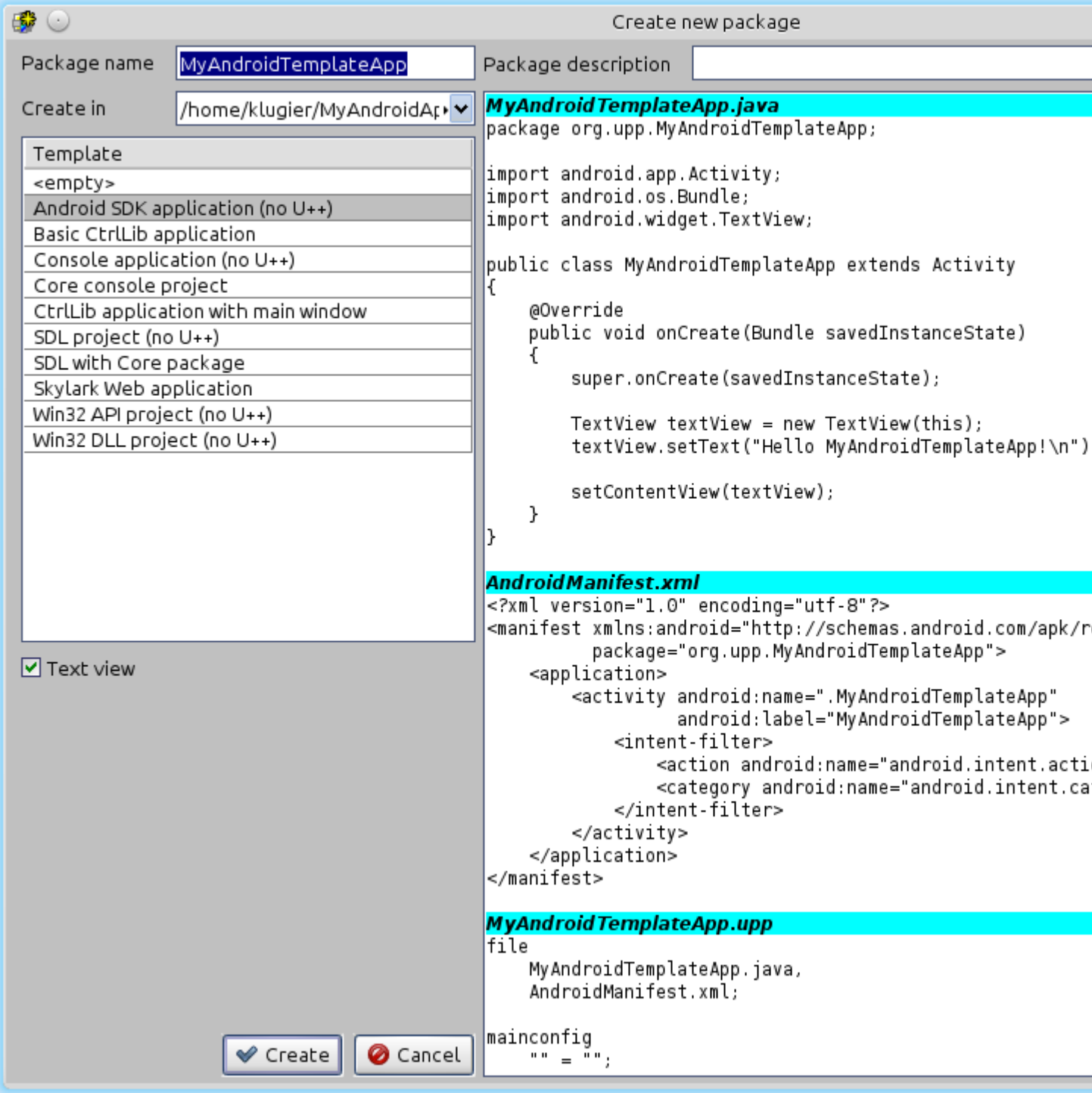
Please notice that this is related to SDK (pure Java development). Maybe in the future I will add NDK template base on native activity. But firstly I should know how it works and what can you do with that. From version 8675 android builder can handle only c++ code.

Porting upp/Core to Android has now biggest priority as well as writing documentation .

Sincerely,
Klugier

File Attachments

1) AppTemplate.png, downloaded 2177 times



Subject: Re: Android builder
Posted by Klugier on Fri, 24 Jul 2015 11:59:59 GMT

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Hello,

I just added screen-shot from Android device. It is available on AndroidMath example site: http://www.ultimatepp.org/examples$AndroidMath$en-us.html.

Sincerely,
Klugier

Subject: Re: Android builder
Posted by Klugier on Sat, 22 Aug 2015 12:56:23 GMT
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Hello one more time,

Finally, I found the way how can I attached documentation into upp website. So, "Working with Android builder" is now online. Here you can check it: http://www.ultimatepp.org/appideAndroidBuilder$en-us.html.

Sincerely,
Klugier

Subject: Re: Android builder
Posted by koldo on Mon, 24 Aug 2015 22:23:45 GMT
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Great, I will try it.

Subject: Re: Android builder
Posted by Klugier on Thu, 08 Oct 2015 13:36:12 GMT
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Hello,

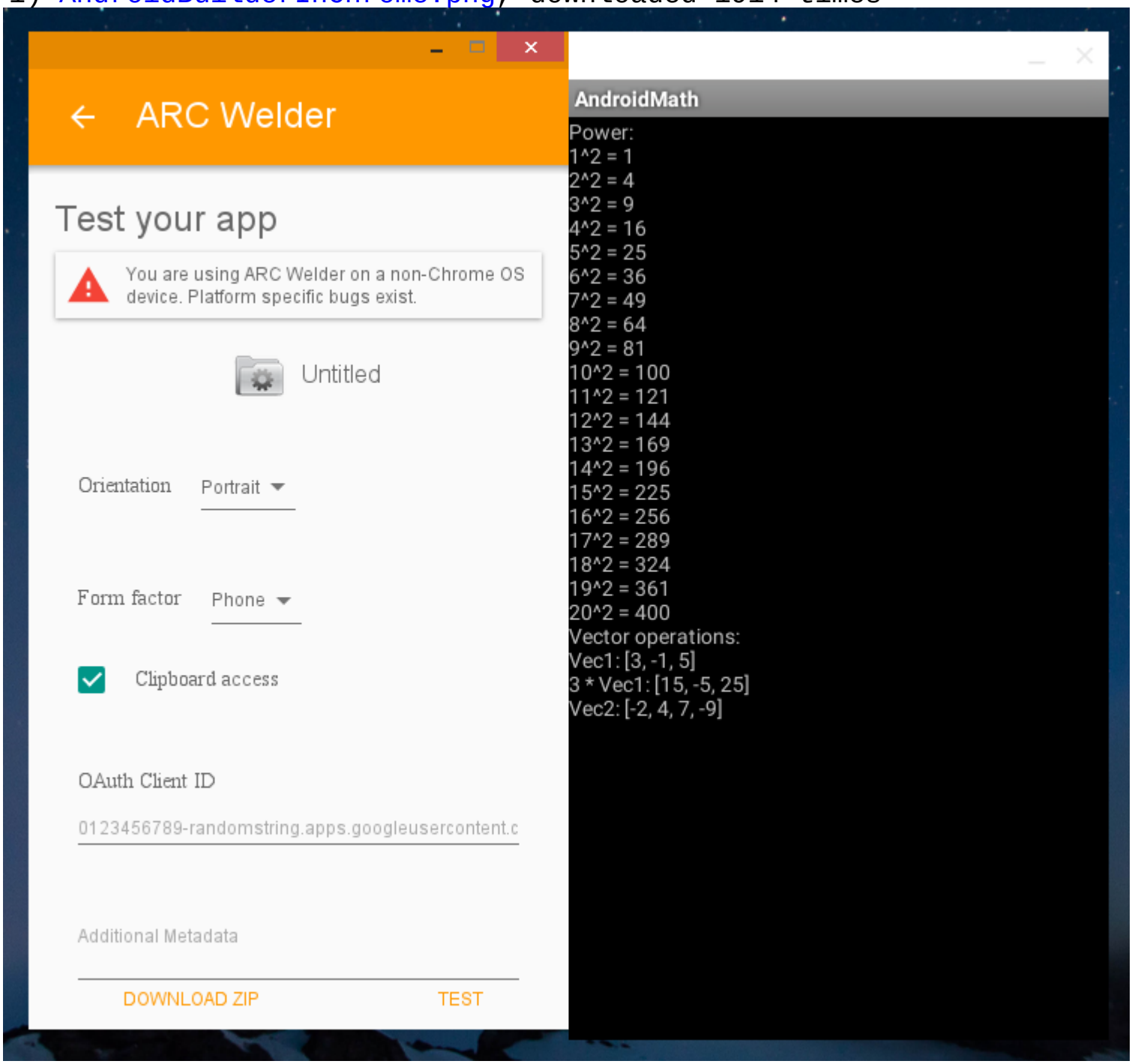
It is possible to run apk build by TheIDE inside Google Chrom browser. Here is tutorial how you can mod chrom to do this: http://www.howtogeek.com/214734/how-to-use-googles-arc-welder-to-run-android-apps-in-chrome/. At the end you will need to specific path to apk created by TheIDE.

Below is the screen-shot that shows how this look like in desktop system:

Sincerely,
Klugier

File Attachments

1) AndroidBuilderInChrome.png, downloaded 1914 times



Subject: Re: Android builder
Posted by mdelfede on Sun, 21 Feb 2016 15:41:15 GMT
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GREAT!

I was just looking for a decent android build environment.... and didn't find it.
So far the "best" is QT, but it has too many caveats and the license is a big problem.

Is there an estimate timeline for completion ? Can I help somehow ? Not skilled at all on android, but I can try to learn it

Ciao

Max

Subject: Re: Android builder
Posted by Klugier on Sun, 21 Feb 2016 19:53:52 GMT
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Hello Max,

I will tell you the truth. I was working on Android Builder during my studies and it is my Master Thesis So, the whole architecture is well documented (around 40 - 50 pages), but only in Polsih. Current status is well described in this topic and in attached links. The best way to test Android Builder is to configure build method and build Android Math example.

What should be done in the future?
- Improvement in IDE infrastructure (reading logs from device via "adb logcat", bugging through jdb, ndk-gdb etc.)
- Improvement in Android Builder - support for unit tests - should speed up development process (We need some kind of TDD)
- TheIDE should be able to launch App directly in emulator
- Gradle integration (I think we should use some kind of Java make - for example Qt uses Ant). Currently we compiling Java sources in single thread.
- Porting Core (It shouldn't be hard - I ran it with simply commenting code - but some things may need improvements like language support!!!)
- Writing GUI back-end for Android (How should we implemented Android activities???)
- Implement native drawing through canvas or OpenGL ES
- OpenGL ES supprot
- Ultimate++ should support GUI containers like Grids, LineralLayout etc.
- Android high DPI support (I think It shouldn't be hard too implemented due to current changes in Draw) - Smart-phones with 4k display
- JNI support we need to call Java code from cpp and vice versa.
- Probably a lot of more things that I forgot to enumerate.

Optional tasks:

- Support for things like accelerometer, video camera etc (Optional).

As you can see U++ with Android is huge project. And it will require a lot of time. That I actually do not have. Currently I am working as a full-time developer in one of local company. But If someone or a company wants to pay for my Job on Android Builder and Android upp integration - I'm open to suggestions. Even if it would be one day per week.

Currently I am posting small patches like Xml indent support for IDE:
- http://www.ultimatepp.org/redmine/issues/1353#change-2790 (Should be usfull for editing Android manifest file)

P.S.
If you want more information we can talk on Skype.

Sincerely,
Klugier

Subject: Re: Android builder
Posted by mdelfede on Mon, 22 Feb 2016 10:47:50 GMT
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I see, quite an huge job to do.
As you say, I guess that core porting should not be so difficult (not too easy, either).
But the rest is not easy at all.
It's a pity that I don't have enough skills on Android to do some part... I could try something, but my time is also scarce.

Anyways, the job you did up to now is really awesome
I'm coding a couple of small apps with QT, but I really miss the comfort of UPP.

Ciao

Max

Subject: Re: Android builder
Posted by Klugier on Sat, 07 May 2016 20:25:36 GMT
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Hello all,

I manage to compile Core on Android (small fixes are required - http://www.ultimatepp.org/redmine/issues/1304). Please notice, that this changes are not merged into trunk. Of course I ran several of Core functionality like HttpRequest. Small screen-shot from device (www.ultimatepp.org page was downloaded via HttpRequest):

I plan that initial version of Core for Android should be available in 2016.1 upp release.

Sincerely and thanks for support,
Klugier

File Attachments

1) CoreOnAndroidSmall.png, downloaded 1631 times



Subject: Re: Android builder
Posted by Klugier on Sat, 01 Apr 2017 17:04:16 GMT
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Hello,

The good news from the Android sandbox is that our builder support BLITZ technology for both POSIX and Windows.

Sincerely,
Klugier