



Android Competition 2011/12



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Introduction

The use of smartphones is increasing exponentially in the last years, to the point of becoming a need more than a luxury. As prices lower and and more and more models enter the market, more and more users are switching from regular phones to smartphones. This, together with the adoption mobile internet connection, is helping society move forward into the universal connectivity. We now live in a networked society, where information is available to anyone, anywhere. Years ago we wouldn't have dreamt of being online 24/7, being able to check your appointments for the week, send a reminder via email from your mobile phone, and write your personal notes for the meeting as you go.

The catalogue of applications has accordingly broadened, encouraged by a complete change in the development model. The amount of resources necessary to develop an application were so prohibitive that only a fistful of companies had the ability to release. Most of the energy and funds were spent in promoting the product, producing the physical media (from floppy disks to DVD's), and distributing it among the users. Internet has changed the way society understands information and data, making it accessible for anyone, everywhere. That lead to the birth of many content providers, digital shops and e-commerce. But it was not until recently that there's been a clear swift from the old model where the developer was an isolated hacker, minority, and developing toolkits were expensive, to this new model where anyone is a potential developer.

Plenty of developing tools (SDK's) have been made available to the general public, some of them free, allowing anyone to develop their own applications and test them completely for free. Moreover, online catalogues like Android Market offer you the opportunity to upload and sell your applications in an easy way. Now releasing or downloading an application is as easy as clicking a button.

This scenario is particularly attractive to young developers and students that can easily test new technologies and ideas at zero cost. There's where EESTEC comes, an association of engineering students ready to put the cutting-edge technology to a test in order to make their ideas come true. EESTEC International is aware of that need and of the abilities of our members, and we want to encourage them with this competition.

In the following pages you will find more information about EESTEC and Android that hopefully will give you a better insight of this project.

What is EESTEC?

Electrical Engineering Students' European Association is an non-political, non-governmental, non-profit organization which targets and trains through it's activities students from electrical profile Universities, Institutes and Technical



Schools in Europe. The association was founded in The Netherlands, in 1986. Nowadays, EESTEC is present in 28 countries and 53 universities across Europe with 2500 active members and indirectly, EESTEC is addressing all students in the faculties that EESTEC exists.

EESTEC's main goal is to promote, establish and develop international contacts and an exchange of ideas between students in electrical profile faculties. The activity of this organization relies on the skills, enthusiasm, openness and will of involvement of its members, also pursuing their professional development, the improvement of their technical knowledge and reaching their full potential. Moreover, students from all Europe meet and respect their differences and their cultures, and this empowered variety results in a friendly international environment and creates awareness for a common European identity.

What is Android?

Android™ is an operating system for mobile devices such as smartphones and tablet computers. It is developed by the Open Handset Alliance, led by Google. It delivers a complete software stack for mobile devices: operating system, middleware and key mobile applications (such as calendar, contacts and email).

Open

Android was built from the ground-up to enable developers to create compelling mobile applications that take full advantage of everything a handset has to offer. It was built to be truly open. For example, an application can call upon any of the phone's core functionality such as making calls, sending text messages, or using the camera, allowing developers to create richer and more cohesive experiences for users. Android is built on the open Linux Kernel. Furthermore, it utilizes a custom virtual machine that was designed to optimize the use of memory and hardware resources in a mobile environment. Android is open source; it can be liberally extended to incorporate new cutting edge technologies as they emerge. The platform will continue to evolve as the developer community works together to build innovative mobile applications.

All applications are equal!

Android does not differentiate between the phone's core applications and third-party applications. They can all be built to have equal access to a phone's capabilities providing users with a broad spectrum of applications and services. With devices built on the Android Platform, users are able to fully tailor the phone to their interests. They can swap out the phone's home screen, the style of the dialer, or any of the applications. They can even instruct their phones to use their favorite photo viewing application to handle the viewing of all photos.



Breaking down application boundaries

Android breaks down the barriers to building new and innovative applications. For example, a developer can combine information from the web with data on an individual's mobile phone -- such as the user's contacts, calendar, or geographic location -- to provide a more relevant user experience. With Android, a developer can build an application that enables users to view the location of their friends and be alerted when they are in the vicinity giving them a chance to connect.

Fast & easy application development

Android provides access to a wide range of useful libraries and tools that can be used to build rich applications. For example, Android enables developers to obtain the location of the device, and allows devices to communicate with one another enabling rich peer-to-peer social applications. In addition, Android includes a full set of tools that have been built from the ground up alongside the platform providing developers with high productivity and deep insight into their applications.

Competition

Why?

The main goals of this project are the following:

- To encourage the use of new technologies among our members
- To unite European students in the same project, fostering cooperation
- To spread the use of open source software
- To give our members an excuse to achieve great things

Also, the winners of the contest will get:

- Nice technology prizes, such as tablets and smartphones
- Android Market activation, so they can give or sell their application through the fastest growing mobile Market!

Who?

- EESTECers! If you are a member of EESTTEC you can go straight to the eestec.net website and participate with your team in the competition! If you are not, search for the EESTEC Local Committee in your university!
- There is no EESTEC Local Committee in your university? Don't worry, every student organization can join the competition! Find out if your organization is already cooperating or convince them to get in contact with us! Once your association is registered with us, just fill the form in eestec.net and participate! form: <http://goo.gl/3HYQk>
- Still no luck? Don't worry, just email us at android@eestec.net to find out



how you can join! We have solutions for everybody!

Grab your friends and join the competition! Remember that the maximum number of teammates is 3!

If your friends are not interested, you can use the forum thread [here](#) if you are an EESTEC member. Moreover, everyone interested in the competition should join our mailing list (my_android@eestec.net), where you can post your request for colleagues among many other things. Brilliant minds like you are out there waiting for you! Just send us one mail to android@eestec.net asking to subscribe to the list and there you are!

How?

The competition will take place in 2 phases.

- For the **first phase** you will need to send a **brief description** of the application you are going to develop, containing the basic information, use of it and the reason it is important for a student or a university. All in less than **10-15 slides** (should be sent in android@eestec.net). Specialists and professors will evaluate its use and vote for the best ideas that will go on to the second phase!
- For the **second phase**, you will need a more detailed description of your application and guess what! An **Android application**! Both the idea and the application will be evaluated and at the end of the phase, the winning team will be announced! You can be one of them, so don't lose time!

But as most things in life, it all starts with a good idea. So, what are you waiting for?

When?

- The deadline for the first phase will be the **15th of December**, so group up, brainstorm and create brilliant ideas for the competition!
- The best ideas will be announced during December.
- Got lucky? Then code, code, code! No time to lose.
- Do some more coding.... Create a better description
- Finally, it's the **29th of February**, so you have your application and the description finished, you send them and you cross your fingers, because this is the last day for the final phase.
- Wait. Bite your nails and...
- On the **EESTEC congress**, which is on the end of March (29 March-6 April), the final results will be announced!
- You win and you get your prize. Easy peasy!

Resources

Ok, now I am ready, but how the heck am I going to create my

***application?***

Android provides a really nice website with perfect documentation, so you can go straight to developer.android.com and see the tutorials.

So, that's all?

Nope! Android has the **open source** power behind it, so you can easily surf the web and find many enthusiasts who have written tutorials at their blogs, or even created whole sites for Android, so don't worry and always remember that, Google is your friend! Just to refer to some of them, you can visit commonsware.com/AndTutorials/ or anddev.org/.

But, I still have some questions and I cannot find answers...

Don't give up! There is still things you can do! You can go to the stackoverflow.com website and see answers to similar questions or even ask your question directly and get feedback! There is nothing stronger than the support of the whole community!