

Android-based boot host

Vlad Victor Ungureanu

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1 About you

What is your name?

Vlad Victor Ungureanu

What is your email address?

ungureanuvladvictor@gmail.com

What is your eLinux.org wiki username?

ungureanuvladvictor

What is your IRC nickname

ungureanuvlad

What is the name of your School and in what country?

Computer Science class of 2015 at Jacobs-University Bremen, Germany

What is your primary language?

Romanian

Where are you located, and what hours do you tend to work?

During the project I will be back in Romania (GMT +2). My usual hours of working are mainly during night after 10PM.

Have you ever participated in an open-source project before?

I participated in Google Code-IN 2011 especially working for FFmpeg, finding bugs and submitting reports. All my work is under the name oanastratulat. List of bugs and patches can be found [here](#). I want to work again close with an open source organization because I am using embedded platform on a daily basis (Raspberry PI and RoBoard for robotics) and I feel that I need to give something in exchange to the community. Being only a simple user does not comfort me anymore and having chance of doing something that lots of members will use is just magnificent.

2 About your project

What is the name of your project?

Arduino-based boot host

Describe your project in 10-20 sentences. What are you making? For whom are you making it, and why do they need it? What technologies will you be using?

The goal of the project is to successfully boot a Beagle Board over its USB interface, all required files being supplied from an Android phone which acts like a host. This project is useful for members of the community that want to test their boards if they have any hardware problem. This method of booting does not involve the MMC slot that sometimes can crash. The operating system will be loaded into the DRAM and therefore will not be needing other components from the board. The project involves a wide range of technologies. On the host

part(Android) there will be used C language to develop a USB Linux driver that listens for ASIC IDs on the interface and sends the specific files for the board to boot up successfully. For the front-end there will be used Java in order to make an app that allows users to download different OS images for the board and to overview the whole process. Regarding the BeagleBoard part there will be TODO

What is the timeline for development of your project? The Summer of Code work period is about 11 weeks long; tell us what you will be working on each week.

At the time when I am writing the proposal I am reading documentation and getting actively to know the boot process of the BeagleBoard and how to make it work with an Android phone. Most of the information I get on the IRC Channel with the member ds2.

28th May - 4th Jun. • **Getting familiarized with the BeagleBoard system, codebase and exploring possibilities how the goal of the project can be achieved.**

5th Jun. - 11th Jun.

12th Jun. - 18th Jun.

19th Jun. - 25th Jun.

25th Jun. - 3rd Jul.

4th Jul. - 11th Jul.

12th Jul. - 19th Jul.

20th Jul. - 27th Jul.

28th Jul. - 4th Aug.

5th Aug. - 12th Aug.

13th Aug. - 20th Aug.

21st Aug. - 28th Aug.

29th Aug. - 5th Sep.

6th Sep. - 13th Sep.

14th Sep. - 23rd Sep. • **Final testing, documentation, packaging and submitting the full work.**

Convince us, in 5-15 sentences, that you will be able to successfully complete your project in the timeline you have described.

I have made contact with the embedded scene 3 years ago, when I bought my first [RoBoard](#). Since then I have developed several projects that make use of such devices and find myself fascinated of the power of such tiny boards and how they can influence our lives. I consider myself as an experienced Linux user and C/C++ developer because I started learning them during my 1st year of high-school and since then I am using them constantly. Regarding Java I have build several apps for some school projects but the most important one is an app that interacts with a MySql server and retrieves/stores data and presents them in a nice UI. Because I have a strong affiliation to robotics me and with the help of my father built a rover which was supposed to be a test device for Google Lunar-X program but ended in a strong personal project. The core of the rover is RB-110, a robotics embedded computer and 3 Arduinos that ensure the communication with the sensors and motors. I have build this robot to be controlled from simple devices that have a web browser with JavaScript support. More projects of mine can be seen on my portfolio page [VDev.ro](#).

Progress:

I intend to publish the progress on my own website, so other people can see how the project is going and how it gets to a final form.

Do you have other obligations from late May to early Aug. ?

I have my final exams starting from 17 May until 2nd of Jul. when I arrive back home and can start working for the project. But apart from that I have no other obligations and would be available from my GSoC work.

3 You and the community

If your project is successfully completed, what will its impact be on the BeagleBoard.org community. Consider who will use it and how it will save them effort.

- TODO

What will you do if you get stuck on your project and your mentor isn't around?

I am a very versatile programmer and during development of my various projects I stumbled upon issues that did not have answers directly on community forums and this thought me how to be creative and overcome the specific problems.