



BA/MA/SA/Group/Lab:

Live Android Performance Monitor

Has it ever happened to you that your Android phone suddenly gets very slow and you just cannot figure out why? That was a rhetorical question; of course it has happened to you (and if you have an iPhone that you have probably seen it happen to a friend). There are many factors affecting real-world performance, and it is difficult to know exactly why a phone is getting slower. Is it a bug in the OS? Are too many processes running in the background? Is the last installed app now hogging the CPU? There are apps that claim to improve performance by terminating apps to cool down the CPU and to free up RAM. However, it is hard to see what exactly these apps are doing and if it really helps at all. We think there is a lot of room for improvement and innovation.

In a first attempt to do automated real-world benchmarking for Android, we developed an App (DiscoMark Benchmark) that uses high-level Android libraries to automatically measure the launch-times of apps. DiscoMark is now used by many people around the world and helps them to accurately and automatically measure a device's real-world performance. However, real-world performance is changing constantly and cannot be reflected by a single measurement or score. Therefore, having a live performance status monitor, instead of a separate benchmarking application, would better suit the very nature of real-world performance.

The goal of this thesis is to develop an Android application that constantly monitors real-world performance and gives useful feedback to the user. There are many possibilities for extensions to this basic idea. If you are interested in this, do not hesitate to contact us. We already have some ideas on where to go with this thesis, but we would love to hear your thoughts on this topic as well!



Requirements: Prior experience with Android programming is an advantage. The student(s) should be able to work independently!

Interested? Please contact us for more details!

Contacts

- Pascal Bissig: bissigp@tik.ee.ethz.ch, ETZ G95
- Gino Brunner: brunnegi@student.ethz.ch, ETZ G63