Master Thesis – Dynamic test suite

Background
At Ericsson we develop a lot of different tests to verify functionality of our products. In order to make this efficient we have divided different test suites into suites of test suites, we can call these frequency levels. These levels are run at different intervals, the first level (quick smoke test) is run every time someone checks in something, the second level is run every time something is delivered and the third level is run once per day. When the test base increases the second level gets bigger and bigger and test cases needs to be moved to the third level due to the time it takes to run. The problem is to select which test suites that are suitable to be moved. In addition we might need to move back test suites to the second level if some test cases start to fail.

Thesis Description
Take the second level and third level test suites and study if and how we can move between these in a dynamic way. We need to consider that new test suites are added to level two continually. The determination could be based on the probability for the test case to fail and other factors. Investigate how we could decide which test cases to move and how this could be implemented in an automated way.

Qualifications
You need to be familiar with Java programming and have the ability to create useful abstractions of complicated systems.

Preferred starting date
Q1 2015

Extent
1 person, 30 credits

Keywords
Java, Programming, Testing, Continuous integration

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