Bachelor Thesis – Trend Analysis for Code Quality

Background
The software code in our product has its roots in the beginning of GSM and has continuously changed and grown during the time. The code volume is of a size that it is hard to have knowledge of every part and create an idea of its quality. Today it exist a build system that executes some tests and code analysis, and present the result on a web page, but there is no functionality for analysis of trends between different builds.

Thesis Description
This thesis aims at visualizing the trend of the code quality in our product. The work will be devided into an analyzing part and an implementing part with possibility to extend with an optional part.

Part 1
Analyze and suggest what tool shall be used, either develop extra functionality on today's build and test system or use a separate tool.

Part 2
- Depending on the result from part 1, a solution shall be implemented and setup:
  - Visualize today's results and its trend on a webpage, based on the result from part 1.
  - The metrics shall be stored in a database for future analysis.
  - The product software code is in C
  - The build system is in Perl, HTML and JavaScript

Optional:
1. Make is possible to visualize the result on a TV screen where the audience is at a distance of a few meters.
2. Suggest additional metrics to use in the presentation.

Qualifications
The project aims at Bachelor of Science students with background in web development, data analysis and software development. Knowledge in visualization and data analysis is of high importance.

Extent
1 person, 15 hp

Preferred Starting Date
2015

Keywords
Visualize, code quality, data analysis, Perl, HTML, JavaScript

Contact Person
Thomas Gotenstam
+46107114005
thomas.gotenstam@ericsson.com