

A Six Sigma Framework for Software Process Improvements and its Implementation

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1 Summary

This paper presents a Software Six Sigma framework for process improvement specifically targeted for use in the software industry. The paper claims that although Six Sigma has been adopted by many software development organizations, a standard Six Sigma framework is still needed to provide standard process and analysis tools for Six Sigma project management, and to help in integrating with other SPI tools and approaches such as PSP/TSP and CMMI. The paper also states that adopting Six Sigma in the software industry is different from using it in the manufacturing industry, and this has provided the motivation for developing Software Six Sigma which focuses on the adoption of Six Sigma to improve software development processes. The conceptual model for Software Six Sigma is presented and a description is given of a web-based implementation of the framework called the 'Six Sigma Project Management Tool' (SSPMT). The paper provides a step-by-step description of how to execute a project using this tool and discusses the architecture, integration and implementation of this tool. The differences between Six Sigma projects and typical software projects are also discussed. In the conclusion the authors state that the SSPMT software based on the framework is still under development.

2 Evaluation

- The proposed framework addresses a real problem in the software industry and therefore the research discussed in this paper is relevant.
- This paper does not mention or compare its framework with other frameworks for using Six Sigma, this issue should be discussed in the paper.
- The efficiency and usefulness of Software Six Sigma framework cannot be judged correctly until the SSPMT tool is used with actual software projects in the software industry. Because of this reason, it is difficult to conclude whether the framework is useful or not.

3 Synthesis

- Comparison with conceptual models of other Six Sigma frameworks would be an interesting research direction.
- As stated in the paper in the 'future work' section, testing of this model on real projects is very important.