

On the Use of Metrics to Compare Process Models, Methods and Tools

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Abstract

Metrics provide the necessary measures to determine if there has been an improvement in productivity or quality. Used in this manner, the metrics prescribe how to capture information about some state of software development, product quality, etc. Given this baseline, the same information is collected later for some other state or practice. Within the limits of random error, the differences between these pairs of values will provide a measure of the improvements that can be attributed to the changes between the two states. Naturally, if there is uncertainty regarding how many differences there are between these two states or if the metrics are qualitatively dissimilar, then the measures and their differences will have little value. This talk considers the problems associated with measuring the impact of major changes to the software process when it is possible to use only different before and after metrics.