

A Comprehensive Evaluation of Workspace Awareness in Software Configuration Management Systems

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Abstract

Workspace awareness has emerged as a new coordination paradigm in software configuration management systems, enabling the early detection of potential conflicts by providing developers with information of relevant, parallel activities. The focus of our particular research in workspace awareness has been on detecting and mitigating both direct and indirect conflicts by unobtrusively sharing information about ongoing code changes. In this paper, we discuss the results of a novel user experiment that we designed as a broad and formative evaluation of workspace awareness, specifically focusing on whether users detect conflicts as they arise and indeed act to mitigate the potential problems. Our results affirm that workspace awareness is an effective solution that promotes active self-coordination among users and furthermore leads to an improved end-product in terms of its quality.