Agile Formality: A "Mole" of Software Engineering Practices

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Abstract:

Members of the agile programming and formal methods communities do not always see eye-to-eye. These two communities often do not talk to or learn from each other. Only recently, as highlighted by the September 2009 issue of IEEE Software, the IFIP workshop on balancing agility and formalism in software engineering, and the first edition of the international workshop for formal methods and agile methods, ideas from the two communities begun to be synthesized. While the problem-solving approaches and psychological attitudes of members of the two communities differ widely, we exploit this clash of viewpoints, exploiting a new development processes that actually blends, rather than mashes together, best practices from the two worlds. This paper summarizes our process and a supporting complex case study, showing that it is not only possible, but tasty, to combine the "chili pepper" of formal methods and the "chocolate" of agile programming, thus producing a tasty "Mole" (as in the highly-spices Mexican sauce) of software engineering practices.