Be Pragmatic and Play to Win:
Experiences with Extreme Programming
in Professional Software Projects

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Abstract

- Extreme Programming can be used for professional projects
- you need to reflect your development processes
- you have to adapt Extreme Programming to your current situation
- be agile, communicate, and be successful
- figures and experiences from three selected professional software projects

Extreme Programming (XP) is still a hot topic in the software engineering community. As an example of an agile development process it is currently one of the most interesting topics. While many people discuss this approach to software development, only few people have actually gained experience in using XP. That may be the reason why many "traditional" software engineers and managers are skeptical. Other factors that contribute to this skepticism are that the planning and control facilities of XP seem to be almost too easy and lightweight; the test-first paradigm apparently scares programmers; systems design appears not to be given due consideration, and pair programming may actually lead to exceeding the budget; deadlines seem to have vanished along with a well-defined development strategy. In short: XP will never work for professional software development.
From our point of view Extreme Programming is very useful for different kinds of projects. We will share our experience as professional software developers and project managers with the audience. We will describe how we have used Extreme Programming to deal with difficult situations like changing requirements within high-risk projects. In contrast with the mainstream view of Extreme Programming we will show that XP is not a simple and haphazard hacking process. It allows for high-quality software development at high speed. But neither is Extreme Programming a silver bullet. It is not suitable for every project, and for many projects Extreme Programming needs adapting. We will provide a number of cases to demonstrate how XP can be adapted to complex application domains and we will show how more specialized planning documents like project stages and reference lines can be handled. The combination of these planning tools with the general XP planning techniques will also be described.

These conceptual considerations are backed up with experience. We have successfully used Extreme Programming in a number of professional projects. We will use three concrete projects in our presentation to illustrate different aspects of this kind of software development. The first is about developing an e-business product and involved four months of actual development time. The second case study examines an ongoing software project which aims at replacing a mainframe system within an insurance company in Germany over the next few years. The last case study is about the development of a fleet management system for a large car rental company.
We shall explain the difficulties and adaptations of Extreme Programming and point out the critical success factors. Facts and figures will stress the benefits gained from Extreme Programming.

Audience

This talk is aimed mainly at professional project managers, project leaders and software engineers who are interested in new development methods or have problems within their current projects. Typically, they are confronted with a project slowing down, having problems with deadlines or need to recover from low quality software production. People who are already interested in Extreme Programming might also be interested in talking about their experiences.

Speakers

Martin Lippert is a research assistant at the University of Hamburg and a professional software architect and consultant at APCON Workplace Solutions. His current work focuses on XP projects in large organizations and framework development with agile processes. He is a senior architect of the JWAM framework and has several years' experience with extreme programming. He is a project coach for extreme programming and software architectures and has given a number of talks, tutorials and demonstrations on various topics of software engineering at international conferences including ICSE, eXtreme Programming, OOPSLA, HICSS and ICSTest, especially XP tutorials at ECOOP 2001 and OOP 2002. Among his publications are articles for conference proceedings, books (Extreme Programming Examined, Extreme Programming Perspectives, Software Quality and Software Testing in Internet Times) and journals. He is a member of the XP 2002 program committee and author of the book Extreme Programming in Action, which is due to be published by Wiley in July 2002. The German version of the book ("Software entwickeln mit eXtreme Programming – Erfahrungen aus der Praxis") is already available.

Heinz Züllighoven, graduated in Mathematics and German Language and Literature, holds a PhD in Computer Science. He is professor at the Computer Science Department of the University of Hamburg and CEO of IT–Workplace Solutions Ltd. He is consulting industrial software development projects in the area of object-oriented design, among which are several major banks. Heinz Züllighoven is one of the leading authors of the object-oriented Tools & Materials Approach. A Tools & Materials construction handbook will be published by Morgan Kaufmann end of 2002. Among his current research interests are object-oriented development strategies and the architecture of large industrial interactive software systems.