Software Evolution and Feedback. Theory and Practice

Description: Evolution of software has long been recognized as one of the most problematic and challenging areas in the field of software engineering, as evidenced by the high, often up to 60-80%, life-cycle costs attributed to this activity over the life of a software system. Studies of software evolution are central to the understanding and practice of software development. Yet it has received relatively little attention in the field of software engineering. This book focuses on topics aimed at giving a scientific insight into the aspect of software evolution and feedback.

In summary, the book covers conceptual, phenomenological, empirical, technological and theoretical aspects of the field of software evolution - with contributions from the leading experts.

This book delivers an up-to-date scientific understanding of what software evolution is, to show why it is inevitable for real world applications, and it demonstrates the role of feedback in software development and maintenance. The book also addresses some of the phenomenological and technological underpinnings and includes rules and guidelines for increased software evolvability and, in general, sustainability of the evolution process.

Software Evolution and Feedback provides a long overdue, scientific focus on software evolution and the role of feedback in the software process, making this the indispensable guide for all software practitioners, researchers and managers in the software industry.

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