

Maintenance Testing of a Software Product

Sabina-Daniela AXINTE, Ioan C. BACIVAROV

Facultatea de Electronică, Telecomunicații și Tehnologia Informației, Universitatea POLITEHNICA
din București, România
axinte_sabina@yahoo.com, bacivaro@euroqual.pub.ro

Abstract

Maintainability, along with conformity, reliability and security, is the characteristic of quality that measures effortlessness and promptness to maintain a system or a software product. Maintainability testing is part of non-functional testing in a software product life cycle. Software maintenance testing is triggered by modifications of components or systems already used in production and it is split in four categories: corrective maintenance, perfective maintenance, adaptive maintenance, preventive maintenance. The main reasons of performing maintenance tests are: modification, migration and retirement. An analytical overview of this testing technique and methods are presented. In addition, the last chapter is dedicated to a comparative analysis of tools that can be use for manual, semi-automated, or automated maintenance testing.

Keywords: Maintainability, Maintenance, Software, Maintenance testing, Software life cycle, Testing tools

References:

- [1] M. Pol, E. van Veenendaal, "Structured testing of information systems: an introduction to Tmap®", Kluwer, 1998.
- [2] Naomi Karten, "Changing How You Manage and Communicate Change: Focusing on the Human Side of Change", IT Governance Publishing, 2009.
- [3] ISO/IEC 14764: 2006, "Software Engineering - Software Life Cycle Processes - Maintenance".
- [4] Penny Grubb, Armstrong A. Takang, "Software Maintenance: Concepts and Practice", World Scientific Publishing Company, 2003.
- [5] Alain April, Alain Abran, "Software Maintenance Management", New York, Wiley, 2008, ISBN 978-0-470- 14707-8.
- [6] www.reliasoft.com/BlockSim/maintainability_analysis.htm (accesat la 21.06.2016)
- [7] Peter Morgan, Angelina Samaroo, Brian Hambling, "Software Testing: An ISTQB-ISEB Foundation Guide", BCS; Revised edition, 2010, ISBN 978-1906124762.