Abstract

Requirement elicitation has been one of the most challenging aspects of software development. Not only complete requirements are difficult to gather at the beginning of a project, they tend to change and widen along with the duration of the project. In addition the largest number of defects that remain in delivered software is attributable to defective requirements. They are also very costly to correct, which can be as much as several orders of magnitude more than
those introduced in the earlier stages of software development. A use case describes how someone or something would interact with proposed system. Use cases are commonly used as a tool during requirements engineering [3]. This paper presents a systematic approach to eliciting quality requirements based on use cases, with emphasis on building the right product. The approach extends traditional use cases to also cover Q-Use Case, and is potentially useful for checking against the 4 C’s – Correctness, Completeness, Clarity and Consistency in order to strengthen requirement elicitation and to achieve high quality in software development.

References

- Eliciting security requirements with misuse cases Guttorm Sindre Æ Andreas L. Opdahl Received: 15 February 2002 / Accepted: 5 March 2004 / Published online: 24 June 2004 Springer-Verlag London Limited 2004
- Requirements Elicitation with Use Cases Shane Sendall and Alfred Strohmeier Swiss Federal Institute of Technology in Lausanne Software Engineering Lab
- An MKS White Paper By Dennis Elenburg Application Engineer
- 7 "S" of Defects Occurrence – A Case Study, Arupratan Santra
- Describing Use Cases with Activity Charts, Jesús M. Almendros-Jiménez and Luis Iribarne
- Analyzing User Requirements by Use Cases: A Goal-Driven Approach, Jonathan Lee and Nien-Lin Xue, National Central University
- Analysis of use case approaches to requirements engineering, Virpi Mäkinen
- Bjorn Regnell, Requirements Engineering With Use Cases – a basis for software development, Department of Communication Systems, LUND University, Lund 1999
- Bagiampou, M. A Use Case Diagrams ontology that can be used as common reference for Software Engineering education, Fac. of Math., Univ. of Patras, Patras, Greece Kameas, A. 6-8 Sept2012
- Ruth Malan and Dana Bredemeyer, Functional Requirements and Use Cases
- Chaelynne M. Wolak, Gathering Requirements The Use Case Approach, School of Computer and Information Sciences, Nova Southeastern University, June 2001
- Andrew Gemino, Drew Parker, Use Case Diagrams in Support of Use Case Modeling: Deriving Understanding from the Picture, Simon Fraser University, Canada
- Søren Lauesen & Otto Vinter, Preventing Requirement Defects, IT University

Index Terms

Computer Science Information Technology
Keywords
Requirement Elicitation  Use Case  Defects  Requirement Engineering