

Frank P. Ginac: Customer Oriented Software Quality Assurance.

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Customer Oriented Software Quality Assurance

This handy and easy-to-read book intends to present software quality assurance with the customer as the focus. This is certainly a laudable effort (and a difficult job). The few selected topics covered by the book are on an introductory level. They are all handled correctly; what is there is right. What is not right is that too much is missing for a comprehensive approach.

Chapter 1 introduces customer oriented attributes of software products and of organizations producing such more or less useful goods. A fictitious company named COSQA (Customer-Oriented Software Quality Assurance) has selected altogether ten such attributes. There are eight of them for the software product: ease of use, documentation, defect tolerance, defect frequency, defect impact, packaging, price versus reliability, and performance; and two for the organization: service and support, and internal processes. The author makes it clear that this set is specific for COSQA and that the reader could come up with a completely different set of attributes for his product and organization. Neither the set of possible attributes from which the choice was made, nor a justification for the actual selection for COSQA is given in detail; therefore it will be hard for the readers to put the method into practice.

The main contribution of the book is a procedure for acquiring the customer requirements concerning the selected attributes. This procedure, presented in chapter 2, consists of the following steps: define the interviewees, develop the questionnaire, perform interviews, evaluate the results, and define the quality attribute set which represents the customer quality requirements. The example questionnaire is certainly useful for readers unfamiliar with checking non-functional requirements; companies practicing technical reviews or software inspections have similar checklists already installed.

Whether the requirements will be met can be observed by measurement of the work products during the development process. In chapter 3, metrics are introduced that characterize the software product and can be related to the attributes selected by COSQA. However, the nature of these relationships is not defined; it is also not stated on which theory or heuristics the assumption is based that these relationships exist.

Chapter 4 is a quick tour through the basic terms of software testing. It can be only intended for readers without any software testing knowledge because everybody who has participated in some software endeavor knows these terms by heart. Amazing that there is no word about walkthroughs, inspections, technical reviews or whatever else it is possible to do in checking before testing. In a customer oriented approach I would not fail to perform joint reviews with customer representatives. Additionally, I would also envisage field testing and/or acceptance testing - both are neither mentioned in this chapter nor anywhere else in the book.

Two distinct topics are discussed under the heading Quality Program in chapter 5. The first topic is the software development process. The waterfall model, prototyping and the iterative development process are presented and hints are given when to select which one to be followed. The chapter might be useful for organizations that are on CMM level 1, with their knowledge about software processes at the same level. The second topic, configuration management, is an introduction for novices in this area. It is a somewhat peculiar justification that from the customer-oriented quality assurance point of view source code control is necessary in order to be able to use certain types of metrics. There is no justification for omitting change management in the first place; with respect to the customers it is a sin. No word is said in this chapter on actual quality programs or quality systems and how they should be geared towards the customer without upsetting the organization's own staff.

Chapter 6 is devoted to the appraisal of software organizations using SEI CMM and ISO 9001 (with the usual but nevertheless incorrect reference to ISO 9000 standard). The existence of the standard ISO 9000 part 3, a kind of translation of ISO 9001 for software brains, is carefully kept secret.

On the cover the book promises "A complete guide to putting the customer first in software quality assurance". It is by no means complete and it is not a guide. The customers are put first - at the very beginning of the project they are supposed to answer a questionnaire about their preferences concerning the attributes of the future product. But the customers are put only first - there is no other suggestion to interact with them during the project.

The author identifies upper management as the primary audience of his book. If its members are not hampered by some knowledge of software engineering and quality management they will find the book a good reading, e.g. on a flight to a customer. The book has the most value for management or quality professionals who have not yet mastered the communication with software professionals, although they ought to. They find here an introductory text for some areas of software quality but unfortunately no hints that some pieces of the puzzle are missing and where to find them.

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