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# A CRITICAL REVIEW ON SOFTWARE REQUIREMENTS SPECIFICATION : QUALITY PERSPECTIVE

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Abstract— Software Requirement is detail portrayal of the framework under usage. Requirements can extend from abnormal state unique articulations of administrations or framework limitations to point by point mathematical functional specifications. The importance of quality criteria in the requirements setting is discussed about, similar to the impact of the quality confirmation amid requirements on different parts of the improvement. Distinctive quality approaches are classified as either cooperative or discuss about as for their effect on the requirements. In view of the methodologies, future difficulties are explained about. This paper shows a review of the most excellent in category and approach for quality confirmation for requirements.

Keywords—Index Terms Requirement Stage, Quality Criteria, SRS

### I. INTRODUCTION

It is realized that SRS quality is the hugest factor in an advancement venture's prosperity and disappointment [6]. The most vital administer is to set up a Software Quality Assurance work as a vital piece of the SDLC and make the general quality of the conveyed software the most astounding need for everybody engaged with the project. According to Experts, requirement stage is the base of the software. They form the basis for software development stages [3]. It is necessary that a complete set of requirements be initializing at starting stage of software development process. The aim of requirements study is to recognize and express requirements that state user requirements and objectives. Software requirements definition is a sequential procedure that workings top-down and bottom-up. Once the top-level set of software requirements has been developed, it is essential to allocate and flow them down to lower level. It is essential that more factors be continue to assure that all software requirements are satisfied in the design stage.

### III. BACKGROUND

IEEE Std 1061-1998 [1], characterizes this as a top-down and bottom-up approach to quality: its top-down view proposed the system that build up the quality requirements factors for the clients and managers ahead of schedule in software development life cycle, correspondence of settled quality factors, in type of quality sub factors to the experts and distinguish the measurements that are connected to established quality factors and sub factors [9]. Requirements change often affects software development operations and makes the development flow need back to earlier development phases for revising related artifacts. As Dromy (1993) states and shows that an arrangement of requirements is right when every single prerequisite expressed in it speaks to something in the determined framework [7, 8]. In the event that the universe of client needs is clarified to by the hover on the left and the requirements by the hover on the right, the segment of right requirements is region B, the region of cover. Obviously, by essentially keeping in touch with some data in an archive, anybody can not ensure that it is right and can any automated requirement tool give an assurance that it will be right [2, 10]. A various experts have been commented that a numbers of quality factors affected to SRS document. The various experts have claimed that SRS and requirement process depend on quality issues, as shown in table 1. [11]

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Expert	Year	Contributions
Hofmann [5]	2001	Requirements Engineering as a Success Factor in Software Projects
Herlea [6]	2002	A Compositional Knowledge Level Process Model of Requirements Engineering
Firesmith [3]	2003	Using Quality Models to Engineer Quality Requirements
Zhang, Z [9]	2005	Effective Requirements Development - A Comparison of Requirements Elicitation techniques
Beecham [10]	2005	Defining a Requirements Process Improvement Model
S. Mouchawrab [11]	2005	A measurement framework for object oriented software testability
Decker [4]	2007	Wiki-Based Stakeholder Participation in Requirement Engineering
Knauss [7]	2008	Assessing the Quality of Software Requirements Specifications
Salger [8]	2009	Inspection Effectiveness for Different Quality Attributes of Software Requirement Specifications: An Industrial Case Study

Table1 A critical view of approaches on SRS by various expert

#### **IV PROBLEM FOUNDATION**

Concern has been communicated in the development software industry that a declining standard of requirement quality has contributed fundamentally to a comparative decrease in development effectiveness. The issue in quality factors is in the lacking requirement, which affects ventures - driving specifically to delays, revamps and varieties and adds to increments in venture time and cost. The research will focus on governmental public projects in quality issues to investigate who is responsible for bad quality factors and the impacts of quality deficiency on development process. The research problem is presented in fishbone method, as fig 1.



Fig 1 SRS Quality Factors view in Fish Bone Method

#### **V RESEARCH OBJECTIVES**

The aim of this study was achieved through a number of objectives which are:

- 1. Identifying main factors that may influence SRS
- 2. Identifying the nature and extent of the impacts of SRS
- 3. Identifying the conflict between the documents
- 4. Establishing a relationship between factors

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### VI CONCLUSION

Various views have been proposed in the literature for SRS. A review of the relevant literature shows that maximum efforts have been put at the later stage of software development life cycle. If requirement based fault can be preset rapidly, simply, and economically, project in later stages of development may not have a huge problem. And the cost to identify and fix an error during the development stage is twenty times more. At last study can conclude that quality of SRS is an important that attempts to predict how much effort will be required for software process at requirement stage.

#### References

- 1. IEEE Standard 1233a1998: IEEE Guide for Developing System Requirements Specifications. New York City: IEEE
- 2. Dromey RG. Concerning the Chimera (software quality). IEEE Software. 1996; 1:33.
- 3. Firesmith, D. (2003). Using Quality Models to Engineer Quality Requirements, Journal of Object Technology, 2(5), 67-75
- 4. Decker, B. et al., (2007). Wiki-Based Stakeholder Participation in Requirement Engineering, IEEE Software, 24(2), 28-35.
- 5. Hofmann, H.F., Lehner, F., (2001). Requirements Engineering as a Success Factor in Software Projects. IEEE Software, 18(4), 58-66
- 6. Herlea, D.E. (2002), A Compositional Knowledge Level Process Model of Requirements Engineering, International Journal of Software Engineering and Knowledge Engineering, 12(1), 41-75.
- 7. Knauss, E., El B Boustani, .C. (2008). Assessing the Quality of Software Requirements Specifications. Proceedings of the 2008 16th IEEE International Conference on Requirement Engineering, Catalunya, Spain, September 8-12, 2008
- Salger, F., Engles, G. and Hofmann, A. (2009). Inspection Effectiveness for Different Quality Attributes of Software Requirement Specifications: An Industrial Case Study. Software Quality, 2009. WOPSQ '09. Workshop on , vol., no., pp.15-21, 16-16 May 2009.
- 9. Zhang, Z. (2005) Effective Requirements Development A Comparison of Requirements Elicitation techniques Department of Computer Sciences. Proceedings of the 15th Software Quality Management.
- 10. Beecham, S., Hall, T. and Rainer, A. (2005) Defining a Requirements Process Improvement Model. Software Quality Journal, 13(3), 247-279.
- 11. S. Mouchawrab et al, —A measurement framework for objectoriented software testability, Carleton University, Technical Report, SCE-05-05, year 2005