

Constructing a model of risk mitigation for anti software ageing during software maintenance

ABSTRACT

Software will normally undergo an inevitable ageing process during its lifecycle. Most often, software rejuvenation is mainly proposed by past researchers to delay software ageing caused by errors accumulation from long running software execution. This method addresses software ageing from software dependability perspective. However little attention has been paid to address software ageing from software engineering perspective, which caused by failures to modify the software or from the results of software changes. Changes are vital to enable software accommodating new functions, ensuring its survivability towards new environment but pioneer in software ageing field argued that the results of software changes could influence software ageing. Hence, this motivate the study to develop a method to tackle software ageing from software engineering perspective to reduce risks impact before it become apparent. This paper discusses on the development of conceptual model of risk mitigation for anti software ageing during software maintenance through concepts gained from literature study. The design of the conceptual model illustrates the relationships between related concepts through concept mapping. It is significant to portray preliminary work in the study thus provide direction for further work to examine the relationships between concepts.

Keyword: Anti software ageing; Risk mitigation; Software maintenance