Abstract

In this paper, Software Reliability Engineering is a field that developed from ancestry in the reliability disciplines of structural, electrical, and hardware engineering. Reliability models are powerful tools of Software Reliability Engineering for estimating, predicting, devious, and assessing software reliability. On the basis of the review the cataloging of software reliability models has been presented as a major part. This categorization is based on the various dimensions of reliability models. Models under review reflect either infinite or finite number of failures. This paper discusses a two-dimensional software reliability growth modeling framework. We measured that an actual software reliability growth progression depends not only on testing time but also on testing effort and also enables us to portray software release planning problem in software reliability growth process. Thus, we can say that software project managers can demeanor more viable and accurate software reliability appraisal by using two-dimensional SRGM.

References

- Goel AL, Okumoto K. Time dependent error detection rate model for software reliability
- Kapur PK and R. B. Garg (1992), A software reliability growth model for an error
- Kapur P. K., R. B. Garg and S. Kumar (1999), Contributions to Hardware and Software
  Reliability, World Scientific, Singapore.
- Khoshgoftaar TM and Woodcock TG (1991), Software Reliability Model
  Selection: A case study; Proceedings of the international symposium on software
  reliability Engineering, pp. 183-191.
  and their applications, IEEE Transactions on Reliability, 1984; R-33: 169-175.
- Ohba, M. (1984), Software reliability analysis models, IBM Journal of research and
  Development 28, 428-443.
- Yashwant K. Malaiya, Michael Naixin, James M. Bieman and Rick Karcich; Software
- Inoue S, Yamada S; Testing-Coverage Dependent Software Reliability Growth
- Jintao zeng, Jinzhong Li, Xiaohui Zeng, Wenlang Luo; A Prototype System of
  Software Reliability Prediction and Estimation; IITSI 2010.
- P. K. Kapur, R. B. Garg and S. Kumar; Contributions to Hardware and Software
- P. K. Kapur, H. Pham, Anshu Gupta, P. C. Jha; Software reliability Assessment
  with OR application; Springer London, 2011.
- Asad, C. A., Ullah, M. I. & Rehman, M. J.-U. An approach for software reliability
  model selection. Proceedings of the 28th Annual International Computer Software and
  Applications Conference (COMPSAC. 04), Vol. 1, 534-539.
- J. D. Musa, D. Iannio and K. Okumoto; Software Reliability Measurement;
- S. Yamada, H. Ohtera, and H. Narihisa; Software reliability growth models with
- S. Yamada, J. Hishitani and S. Osaki; Software reliability growth with a Weibull
- Hamlet, D. Are we testing for true reliability? IEEE Software, Vol. 9, No. 4 (July
  1992), 21. 27.
- Shinji Inoue and Shigeru Yamada; Two-Dimensional Software Reliability
  Assessment with Testing-Coverage; 2008 Second International Conference on Secure
  System Integration and Reliability Improvement July 14-July 17.
  1996.
- C. Y. Huang and S. Y. Kuo; Analysis of incorporating logistic testingeffort
- T. Ishii and T. Dohi; Two-dimensional software reliability models and their
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3–10.

Index Terms

Computer Science
Software Engineering

Keywords
| Software Reliability | SRGM | Two dimensional | Non-Homogeneous Poisson Process (NHPP) | Release Time |