

研发、设计、测试

Weibull分布在软件最优交付时间估算中的应用

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摘要 软件最优交付时间在很大程度上取决于软件可靠性估算。Weibull分布较有效地描述了软件测试过程中错误发现的统计特征, 是一种有效的软件可靠性分析模型。在分析Weibull分布的基础上, 提出了Weibull分布的累积函数拟合模型, 解决了错误发现的不连续问题, 推导出两种利用Weibull累积函数模型进行软件最优交付时间的估算公式, 并结合具体实例验证了模型的有效性。

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Application of Weibull distribution model in estimating the best time for software delivery

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Abstract

The best software delivery time of a software product is highly determined by the software reliability estimation. Weibull distribution is an effective model for software reliability analysis, which well describes statistical characteristics of defect detection in software testing. Based on the analysis of the Weibull distribution characteristics, a Weibull distribution accumulative function fitting model is suggested, and the discontinuity problem of defect detection is resolved. Furthermore, by making use of the model, two kinds of formula to evaluate the best time for software delivery are given. Finally, an example is analyzed to prove the model's effectiveness.

Key words [software testing](#) [Weibull distribution](#) [software reliability](#) [best software delivery time](#)

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