Abstract

Software reliability assessment is increasingly important in developing and testing new software products. Logarithmic Poisson Execution Time Model (LPETM) is a software reliability model which predicts the expected failures and hence related reliability quantities better than existing software reliability models. It uses Non-Homogeneous Poisson Process (NHPP) with a mean value function that is dependent on exponentially falling fault detection rate. The well-known sequential Probability Ratio Test (SPRT) procedure of statistical science is adopted for this model in order to decide upon the reliability / unreliability of developed software. The model is evaluated by using 6 Data Sets.

References


**Index Terms**

Computer Science  
Information Technology

**Keywords**

Lpetm  
Maximum Likelihood Estimation  
Unreliable Software  
Mean Value Function  
Intensity Function