Software reliability growth model is one of the basic techniques to assess software reliability quantitatively and it provides the essential information for software development activities. In this paper we compare the predictive capability of popular software reliability growth models (SRGM), such as exponential growth, delayed S-shaped growth and inflection S-shaped growth models. We first review the log-logistic testing-effort function and also discuss exponential type and S-shaped types SRGM with log-logistic testing-effort. We analyze the real data applications and compare the predictive capability of these SRGM. The experimental results reveal that inflection S-shaped type SRGM has better prediction capability as compare to exponential type SRGM.


Software Reliability Growth Models with Log-logistic Testing-Effort Function: A Comparative Study


Index Terms

Computer Science
Software Engineering

Keywords

Software reliability growth models testing-effort function software testing non-homogeneous Poisson process estimation methods