Abstract

Software reliability assurance is a challenging task. The accuracy of predicting the defects in the software is based on many factors such as the estimated size of the software, estimated defect density and software complexity. Numerous software metrics and statistical models have been developed to address this but there are limitations of these models to different software development projects. For successful completion of software projects, the program managers need relevant metrics to help in planning, monitoring and controlling functions. While Software program managers rely upon Plan Vs Actual metrics for project management attributes of Schedule, effort and cost, but often do not track these metrics with respect to quality(defects). This paper discusses the experience of using defect prediction model across software development projects and how the defect metrics (Predicted Vs Actual) help program managers in planning resources and schedule, stakeholder expectation management, risk mitigation and project control.

References

Leveraging Defect Prediction Metrics in Software Program Management

- Fenton, N. E. and Ohlsson, N. &quot;Quantitative analysis of faults and failures in a complex software system&quot; IEEE transactions on software Engineering, Vol 26, No 8, August 2000, 797-814
- Jiantao Pan , &quot;Software Reliability&quot; Carnegie Mellon University, http://www.ece.cmu.edu/~koopman/des_s99/sw_reliability/, 1999
- Kehan Gao, Taghi M. Khoshgoftaar, Huanjing Wang, Naeem Seliya , &quot;Choosing software metrics for defect prediction: an investigation on feature selection techniques&quot;, Software—Practice & Experience, Volume 41 Issue 5, April 2011

Index Terms

Computer Science Software Engineering

Keywords
Management Measurement Reliability Software Maintenance Project Schedule
Planning Resource Planning
Project

Program Management