Abstract

It is always a very costly process to achieve a high level of reliability in software industry. So it is desirable for an industry to design software with minimum cost and optimal level of reliability. This paper addresses the problem of maximizing reliability of software by minimizing the overall cost of software. The technique deals with selecting various modules of application with optimal reliability of each to obtain desired level of reliability and cost of application. The problem is divided into three sections. Firstly it considered reliability of application as constraint to find optimal cost, secondly the cost is taken as constraint to find maximum amount of reliability for given cost constraint. At last the GA is used to find an optimal solution using both cost and reliability constraints exist.

References

- Wang W., W. Y. 1999 An Architecture-Based Software Reliability Model In Proc. of
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Index Terms

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Keywords
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