Abstract

The trend of day for object oriented software is highly complex objects, interacting with each other very rapidly. As a result it is becoming more and more difficult to manage and measure the complexity of the systems being developed. Relation-based testability measure is a metric, to provide the highly desirable insight to the inherent complexity of any object oriented system. We apply relation-based testability measure (RTM) to a University Automation product to measure the complexity of the system at an earlier stage of the development. Based on the approach we have developed an algorithm to measure the overall relational complexity of any object oriented system. The algorithm is very generic, accommodating both the flavors of traditional procedural approach and the modern object oriented approach. Applied at an early development stage, it can be very helpful for design, development and testing teams to co-ordinate their efforts and produce a much better and easy way to handle software product.


IEEE Transactions on Software Engineering, 20(6),


RTM: A Relation based Testability Metric for Object Oriented Systems


Index Terms

Computer Science
Software Engineering

Keywords
Cyclomatic Complexity (CC)
Structural Complexity (SC)
Total Cyclomatic Complexity of Module (TCCM)