

## Automatic MC/DC Test Data Generation from Software Module Description

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**Abstract :** Modified Condition/Decision Coverage (MC/DC) is a structural coverage criterion that is highly recommended or required for safety-critical software coverage. Therefore, many testing standards include this criterion and require it to be satisfied at a particular level of testing (e.g. validation and unit levels). However, an important amount of time is needed to meet those requirements. In this paper we propose to automate MC/DC test data generation. Thus, we present an approach to automatically generate MC/DC test data, from software module description written over a dedicated language. We introduce a new merging approach that provides high MC/DC coverage for the description, with only a little number of test cases.

**Keywords :** domain-specific language, MC/DC, test data generation, safety-critical software coverage

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