

## **ABSTRACT**

Software testing is a vital role in software development life cycle. The first step on software testing is generation of test cases. One of the way to generate test case is to use UML Model, which called model-based testing.

Classification Tree method (CTM) was used to generate test case from UML model which have hierarchy characteristic, CTM have a problem to identified classification tree[1]. Integrated Classification Tree Methodology (ICTM) will model the relationship into the table before modeling classification tree. With relation table will known the relationship of superclass-subclass and depth of inheritance the classification tree. ICTM will automated generated to class diagram UML model in XMI file.

ICTM will generate test case for dependency class on class diagram. The total of test scenario will be reduced based on the child class, because the test case will be assumed by scenario test parent class.

Keywords: Software Testing, case study, model-based testing, ICTM