Title	UML2.4　　　　　　　UML　　UML
Author(s)	，
Citation	
Issue Date	2012-03
Type	Thesis or Dissertation
Text version	author
URL	http://hdl.handle.net/10119/10403
Rights	
Description	Supervisor:　　　　　　　　　　，　　　　　　，

Dependency Generation Model for UML Diagram and UML Modeling Elements of UML 2.4

Yali Wang (1010076)

School of Information Science,
Japan Advanced Institute of Science and Technology

February, 2003

In this thesis, I improved the Dependency Generation Model (DGM) for UML diagram and UML Modeling elements of UML 1.5 to UML 2.4, which was proposed by Masayuki Kotani, based on Unified Process (UP).

A dependency relationship indicates that change to an element (the source) might cause changes in other elements (the targets).And the dependency relationships among the UML diagram (modeling elements) are too complicated to handle manually during the whole software development process. Fortunately, dependency is a model-level (meta level) relationship, not a run-time relationship, describing the need to investigate the model definition of the target element for possible changes if the model definition of the source element is changed. So we could find the possible dependencies in the meta level by DGM.

The current DGM is based on UML 1.5. However, UML has been expanded to 2.4, with introduction and modification of many UML diagrams and modeling elements, especially the introduction of "Internal Structure". So it becomes necessary to improve and expand the current DGM to be applicable to UML 2.4.

The basics of DGM are 3 rules: comparison rule, addition rule and selection rule. In order to improve DGM, I mainly focused on comparison

rule and addition rule. Firstly, I re-defined the basic dependency relationships (BDR) base on the dependency relationships defined in the UML 2.4, re-grouped the UML diagrams and modeling elements in meta level(called generation model elements), then listed all the possible BDR between these generation model elements, which is called Addition rule. Secondly, I classified the comparison rule systematically and improved it to UML 2.4. As for the selection rule, it is applicable to UML 2.4 without radical changes.