

The Object Constraint Language: Precise Modeling with UML 1999 112 pages

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This chapter introduces and defines the Object Constraint Language (OCL), a formal language used to express constraints. These typically specify invariant conditions that must hold for the system being modeled. Note that when the OCL expressions are evaluated, they do not have side effects (i. e., their evaluation cannot alter the state of the corresponding executing system). In addition to specifying invariants of the UML metamodel, UML modelers can use OCL to specify application-specific constraints in their models. OCL is used in the UML Semantics chapter to specify the well-formedness rules of the metaclasses comprising the UML metamodel. ii Object Constraint Language, v2.4. Disclaimer of warranty. While this publication is believed to be accurate, it is provided "As is" and may contain errors or misprints. IMM, MDA, Model Driven Architecture, UML, UML Cube logo, OMG Logo, CORBA and XMI are registered trademarks of the Object Management Group, Inc., and Object Management Group, c, OMG, c, Unified Modeling Language, c, Model Driven Architecture Logo, c, Model Driven Architecture Diagram, c, CORBA logos, c, XMI Logo, c, CWM, c, CWM Logo, c, IOP, c, MOF, c, OMG Interface Definition Language (IDL), c, and OMG Systems Modeling Language (OMG SysML), c are trademarks of the Object Management Group. OCL is a language for precise textual description of constraints which apply to the graphical UML models. The new OCL 2.0 standard goes far beyond the previous language, not so much in features but mainly in the approach chosen for laying much more precise and formal foundations for the language. This paper, authored by members of the OCL 2.0 team, gives an overview of the new aspects of OCL 2.0 and also provides a critical discussion of a few selected aspects of the language. The Object Constraint Language. Precise Modeling with UML. Addison Wesley, 1999. [14] Jos Warmer and Anneke Kleppe. Publications, including three internationally published books. Steffen Zschaler obtained his Dipl.-Inf. from the Dresden University of Technology. Solving Modeling Issues with Constraints. Abstract Classes. Specifying Uniqueness Constraints. Adding Details to the Model versus Adding Constraints. Cycles in Class Models. Constraints on Associations. Previously he was a member of the UML core team, where he was responsible for the development of the Object Constraint Language (OCL). The author of several books and numerous international articles, Jos is an advisor on the UML method and techniques at the De Nederlandsche Bank. Anneke Kleppe is a consultant and adviser at Klasse Objecten, which she founded in 1995 to train and coach companies on the use of object technology, modeling, and MDA.