Many UML projects are not Use Case driven.

How UML IS USED

The Unified Modeling Language (UML) emerged in the mid-1990s through the combination of previously competing object-oriented (OO) software engineering methods developed by Booch [1], Jacobson et al. [6], Rumbaugh et al. [8], and others. Control over its formal evolution was placed in the hands of the Object Management Group (www.omg.org), and the language has become widely accepted as a modeling standard for OO software development. A large number of practitioner articles and books, and some contributions by academic researchers, have been devoted to articulating various aspects of the language, including guidelines for using it [5]. UML per se is a language, not a methodology, so it is not surprising these guidelines are not always consistent [4].

Despite widespread interest in UML, there is little quantitative evidence on the level and nature of UML use. Our study examines seven UML components used in systems analysis and design and addresses three key questions. First, to what extent are these UML analysis components being used and for what purposes? Second, do differences in the levels of component use and the reasons for these differences reflect the apparent complexity of the language [7, 9]? Third, how successful is UML in facilitating communication within software development teams?

The research began with a review of the UML literature and some preliminary interviews with UML practitioners and their clients. Following this, we developed a Web survey targeted at analysts familiar with OO techniques and UML in particular. UML 1.5 contains nine basic diagrams [3]—six of these (Use Case, Class, Activity, Collaboration, Sequence, and Statechart Diagrams) plus Use Case Narratives were determined to be most closely related to the research questions. The Object Diagram, which is closely related to the Class Diagram, and the Component and Deployment Diagrams, used in application architecture modeling, were excluded as less relevant and to keep the survey to a reasonable

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