Abstract

For defining a set of unambiguous and language-independent metrics and other relevant concepts, the need for definition of a formal conceptual framework of the context/environment, particularly for safety-critical environments, has earlier been recognized and emphasized. In this paper, a formal conceptual framework is proposed for defining metrics and other relevant concepts for a component-based system, in which, instead of component, assembly—a slightly modified and more general concept—is taken as a basic building block for design and development of software. The paper discusses a formal conceptual framework for the structure of context for a component-based system. In another paper, a formal conceptual framework for the dynamics/ behaviour within the context of a component-based system is discussed.
- M. Goulão, F. Abreu, Formalizing metrics for COTS, Department of Informatics, Faculty of Sciences and Technology, New University of Lisbon, 2825-114 Monte de Caparica, Portugal, 2005a.
- M. Goulão, and F. Abreu, Formal Definition of Metrics upon the CORBA Component Model. First International Conference on the Quality of Software Architectures (QoSA) 2005b.

**Index Terms**

Computer Science  
Software Engineering

**Keywords**

Component  
Assembly  
Formal Conceptual Framework.