World Academy of Science, Engineering and Technology
International Journal of Cognitive and Language Sciences
Vol:10, No:01, 2016

Revolutionary Solutions for Modeling and Visualization of Complex Software Systems

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Abstract : Existing software modeling and visualization approaches using UML are outdated, which are outcomes of reductionism and the superposition principle that the whole of a system is the sum of its parts, so that with them all tasks of software modeling and visualization are performed linearly, partially, and locally. This paper introduces revolutionary solutions for modeling and visualization of complex software systems, which make complex software systems much easy to understand, test, and maintain. The solutions are based on complexity science, offering holistic, automatic, dynamic, virtual, and executable approaches about thousand times more efficient than the traditional ones.

Keywords : complex systems, software maintenance, software modeling, software visualization
Conference Title : ICCS 2016 : International Conference on Complex Systems
Conference Location : Paris, France
Conference Dates : January 21-22, 2016