VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belgaum

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PROJECT REPORT

On

"CHARMY: A Framework for designing and verifying architectural specifications"

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ABSTRACT

Introduced in the early stages of software development, the CHARMY framework assists the software architect in making and evaluating architectural choices. Rarely, the software architecture of a system can be established once and forever. Most likely poorly defined and understood architectural constraints and requirements force the software architect to accept ambiguities and move forward to the construction of suboptimal software architecture.

"CHARMY (Checking Architectural Model Inconsistency): A Framework For Designing And Verifying Architectural Specifications" aims to provide an easy and practical tool for supporting the iterative modeling and evaluation of software architectures. From an UML-based architectural design, an executable prototype is automatically created. CHARMY simulation and model checking features help in understanding the functioning of the system and discovering potential inconsistencies of the design. When satisfactory and stable software architecture is reached, Java code conforming to structural software architecture constraints is automatically generated through suitable transformations. The overall approach is tool supported.