

Predicate Abstraction for Murphi

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UUCP-06-002

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Abstract

Predicate abstraction is a technique used to prove properties in a finite or infinite state system. It employs decision procedures to abstract a concrete state system into a finite state abstraction system, which will then be model checked and refined. In this paper, we present an approach for implementing predicate abstraction for Murphi[1] using CVC Lite[2]. Two cases for each property(*i.e.* SAT and UnSAT), are tried in model checking. When a fixed point is reached finally, the validity of each property is declared. We applied our tool(called \mathcal{PAM}) on the FLASH[3] and German[4] protocols. The preliminary result on these protocols is encouraging.