

A Reduced Distributed State Space for Modular Petri Nets

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Abstract : Modular verification approaches have been widely attempted to cope with the well known state explosion problem. This paper deals with the modular verification of modular Petri nets. We propose a reduced version for the modular state space of a given modular Petri net. The new structure allows the creation of smaller modular graphs. Each one draws the behavior of the corresponding module and outlines some global information. Hence, this version helps to overcome the explosion problem and to use less memory space. In this condensed structure, the verification of some generic properties concerning one module is limited to the exploration of its associated graph.

Keywords : distributed systems, modular verification, petri nets, state space explosion

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