On the Problem of Characterizing Boolean Petri Nets

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Abstract

Petri nets are used for describing, designing and studying discrete event-driven systems that are characterized as being concurrent, asynchronous, distributed, parallel, and/or nondeterministic. As a graphical tool, Petri net can be used for planning and designing a system with given objectives, more effectively than flowcharts and block diagrams. As a mathematical tool, it enables one to set up state equations and algebraic equations and other mathematical models which govern the behavior of systems. The aim of this paper is to present some basic results and necessary and sufficient condition for a 1-safe Petri net that generates all the binary n-vectors as marking vectors, we shall call such Petri nets as Boolean Petri nets.

References

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**Index Terms**

Computer Science Information Sciences

**Keywords**

1-safe Petri net, reachability tree, binary n-vector, marking vector