## Introduction

This Model form is a short description of the SharedMemory model that comes, for the Model Checking Contest @ Petri Nets, with: a set of PNML files, a set of properties to be checked (possibly one file per model instance) and an optional set of properties concerning the model (invariants, etc. – possibly one file per model instance). For Coloured Nets, equivalent PNML P/T net files are proposed too.

SharedMemory
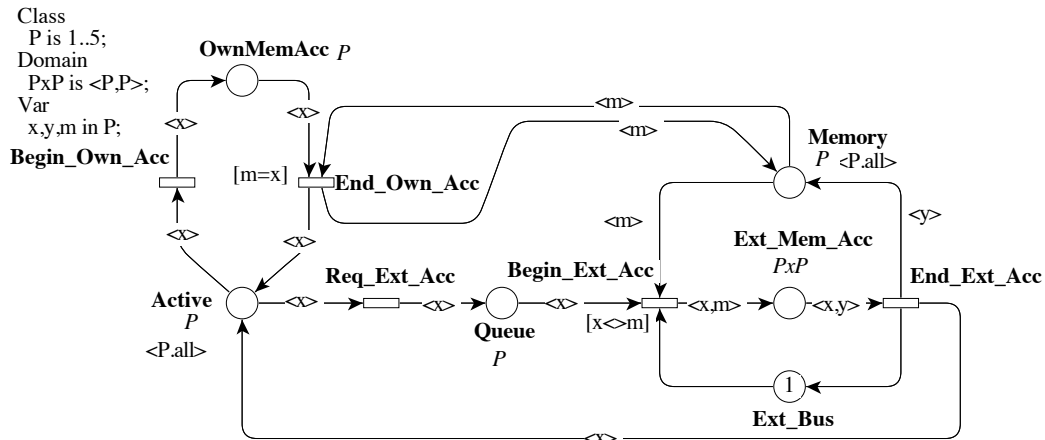
Presentation

Description: This model is an example extracted from a paper on GreatSPN. It models a system composed of P processors, each one with a local memory. Each processor can access its local memory using a dedicated local bus and the other memories using a unique shared bus. The processor accessing a remote memory have priority on those accessing their own memory. It is assumed that external access request causes preemption of the owner processor eventually accessing its local memory.

Origin: http://dblp.uni-trier.de/rec/bibtex/conf/pnpm/ChiolaF89

Scaling parameter

Name	Description	Values
P	P is the number of processors. Initial marking of places Active and Memory are impacted.	5, 10, 20, 50, 100, 200, 500, 1 000, 2 000, 5 000, 10 000, 20 000, 50 000,100 000

Information about the Model

Data on the Model

Number of places	Number of transitions	Number of arcs	Scaling parameter value
6	5	16	all

Stated Properties

safe	✔	free choice	✔	event graph	✗
deadlock	?	state machine	✗	reversible	?

Other Properties (not mandatory)