

## Introduction

This Model form is a short description of the Three-Module Ring 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.

## Three-Module Ring

### Presentation

#### Description:

- Comment from the submitter: The Petri net is a nice example for a safe Petri net with a reasonably large state space. It originally models a hardware circuit.
- Original description: The net models a three-module ring architecture. The communication architecture contains as many channels as there are modules. It tests the occurrence of global deadlock arising from a local one. It uses pausable clocking scheme on arbitrated input and output channels.

**Origin:** Sohini Dasgupta from the University of Newcastle

#### Scaling parameter

Name	Description	Values
N/A	This model has no scaling parameter.	N/A

### Information about the Model

#### Data on the Model

Number of places	Number of transitions	Number of arcs	Scaling parameter value
139	87	410	all

### Stated Properties

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

### Other Properties (not mandatory)