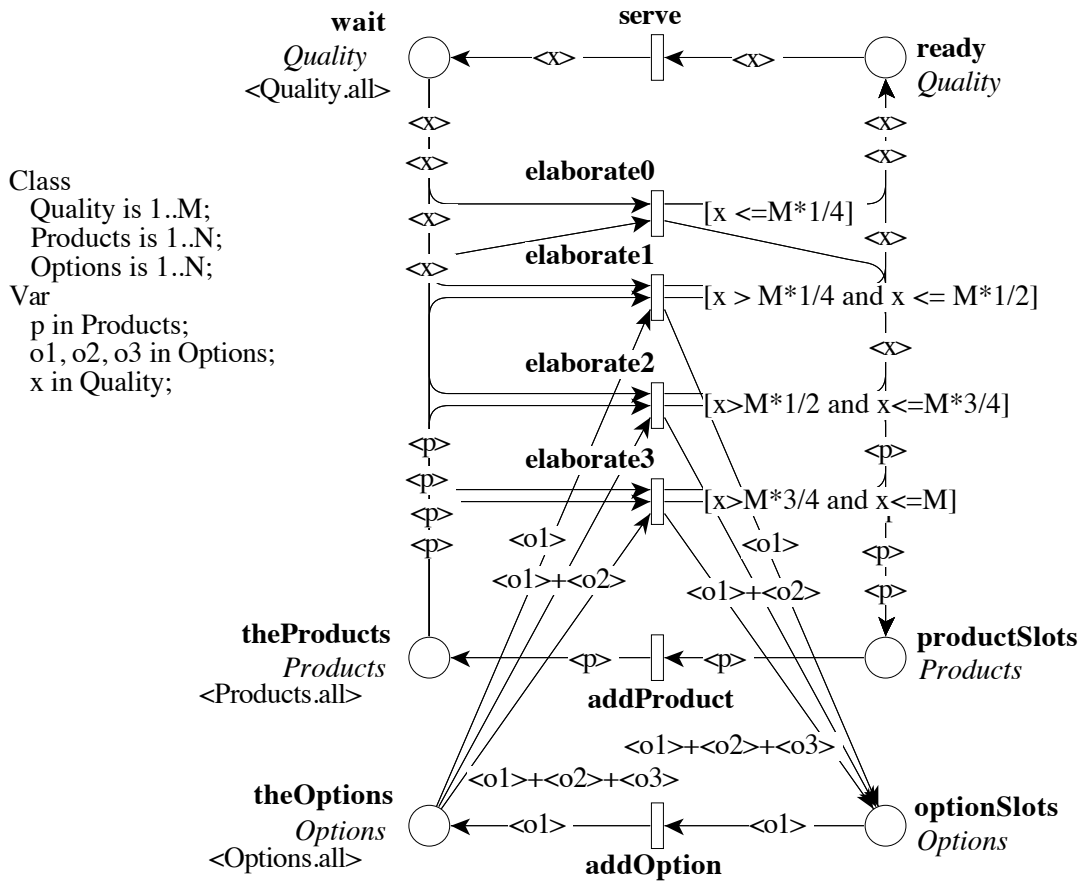


## Introduction

This Model form is a short description of the A hot drink vending machine 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.

### A hot drink vending machine



## Presentation

**Description:** A Symmetric net modeling a simple hot drink vending machine. This model handles cycles of elaborations of a hot drink (*Products*). Each type of elaboration (modelled by the *elaborateX* transitions) carries a set of options (*Options*) for the product. For *elaborate0* the set of options is empty. Products and options are restored from the places *productSlots* and *optionSlots*.

Each type of elaboration has an intrinsic quality level range (*Quality*), which is associated with the service. The cardinal of the set of quality levels is  $M = 4 \times N$ ,  $N$  being the number of products.

**Origin:** Model adapted from: R. Muschecici, J. Proença, and D. Clarke. Modular Modelling of Software Product Lines with Feature Nets. In 9<sup>th</sup> International Conference on Software Engineering and Formal Methods (SEFM), volume 7041 of LNCS, pages 318–333. Springer, 2011

#### Scaling parameter

| Name | Description        | Values |
|------|--------------------|--------|
| N    | Number of products | 2,10   |

## Information about the Model

Data on the Model

| Number of places | Number of transitions | Number of arcs | Scaling parameter value |
|------------------|-----------------------|----------------|-------------------------|
| 6                | 7                     | 28             | 2, 10                   |

### Stated Properties

|          |   |               |   |             |   |
|----------|---|---------------|---|-------------|---|
| safe     | ✓ | free choice   | ✗ | event graph | ✗ |
| deadlock | ✗ | state machine | ✗ | reversible  | ✓ |

### Other Properties (not mandatory)