

Introduction

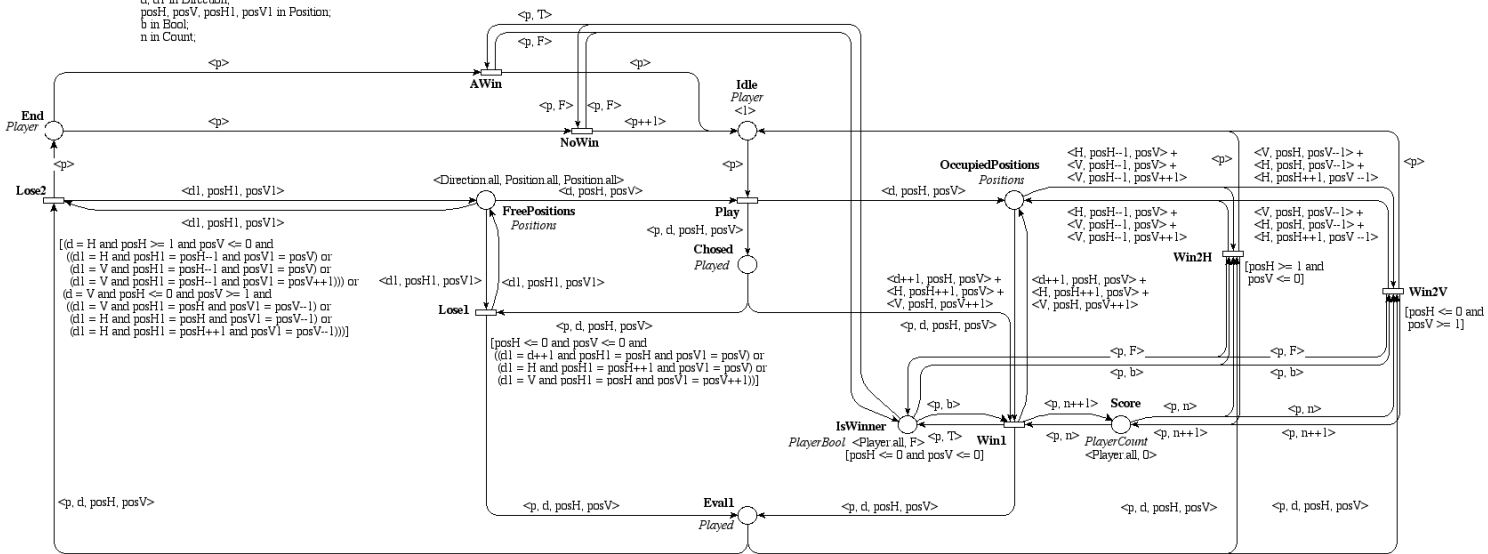
This Model form is a short description of the Dot&Boxes model that comes, for the Model Checking Contest @ Petri Nets, with: a set of PNML files, a set of properties to be checked (possibly one file per model instance) and an optional set of properties concerning the model (invariants, etc. – possibly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

Dot&Boxes



```

CLASS
  Player is 1, 2;
  Direction is {H, V};
  Position is 0..1;
  Count is 0..4;
  Bool is {T, F};
DOMAIN
  PlayerCount is <Player, Count>;
  Positions is <Direction, Position, Position>;
  Played is <Player, Direction, Position, Position>;
  PlayerBool is <Player, Bool>;
VAR
  p in Player;
  d, d1 in Direction;
  posH, posV, posH1, posV1 in Position;
  b in Bool;
  n in Count;
    
```



Presentation

Description: Dot and Boxes is a pencil and paper game you have certainly played in your childhood: from an empty grid of dots, two players add, in turn, a line between two adjacent dots. The player that finishes a box owns it and can play again. The game ends when all possible lines are drawn and the winner is the player that owns the larger number of boxes.

Exceptionally, this model has no equivalent P/T.

Origin: http://en.wikipedia.org/wiki/Dots_and_Boxes

Scaling parameter

Name	Description	Values
N	The grid has being square with $N+1$ dots per line	10, 20, 30, 40, 50

Information about the Model

Data on the Model

Number of places	Number of transitions	Number of arcs	Scaling parameter value
8	8	44	all

Stated Properties

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

Other Properties (not mandatory)

You can state here the optional properties you want, such as invariants and/or bounds. These may be provided for one (first) scaling parameter only and then for all scaling parameters in other files