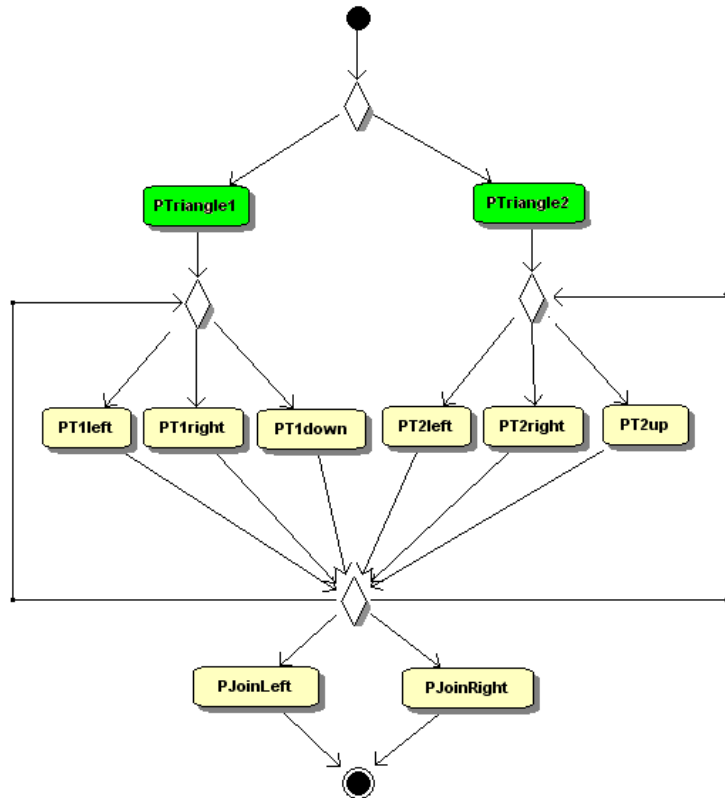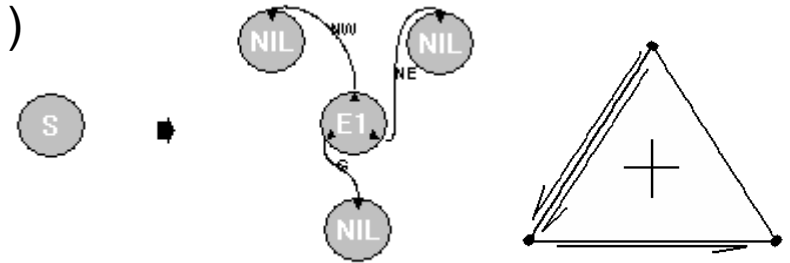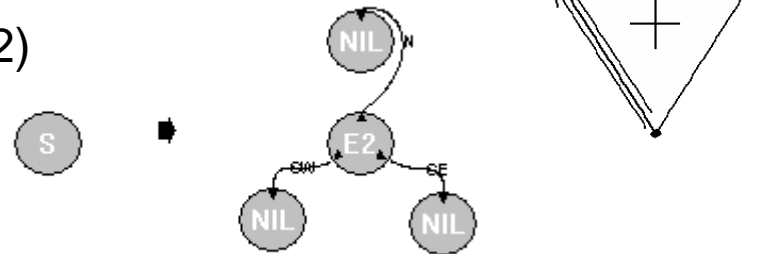# GRAPH GRAMMAR FOR TRIANGULAR MESH GENERATION
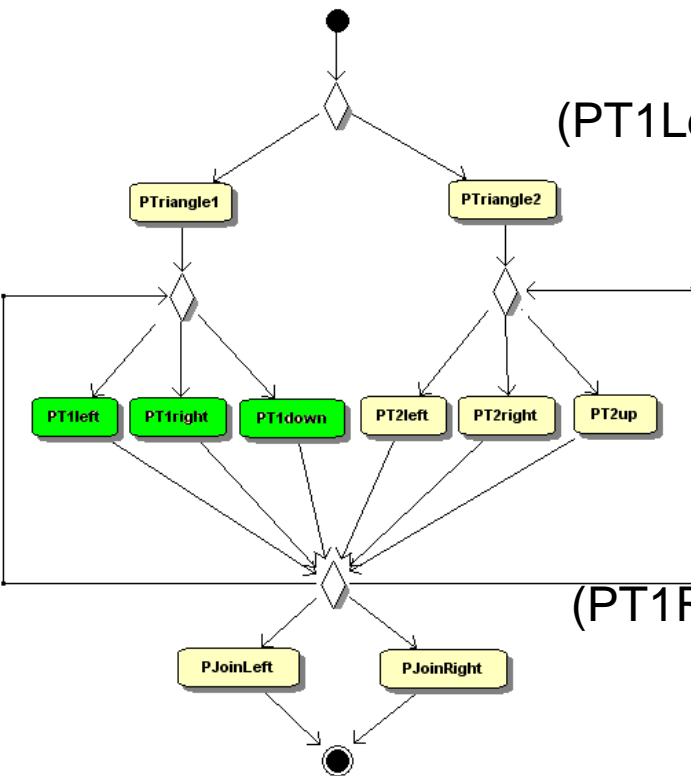
(PTriangle1)

Graph grammar production generating
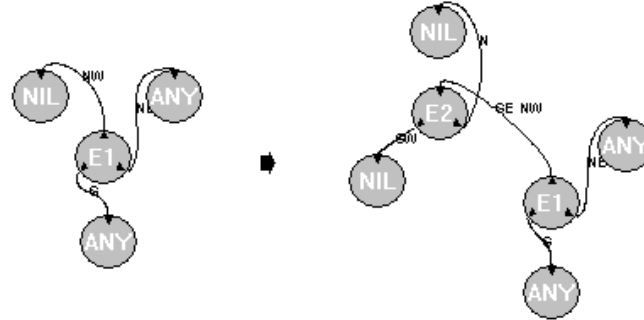triangular element of type-1

(PTriangle2)

Graph grammar production generating
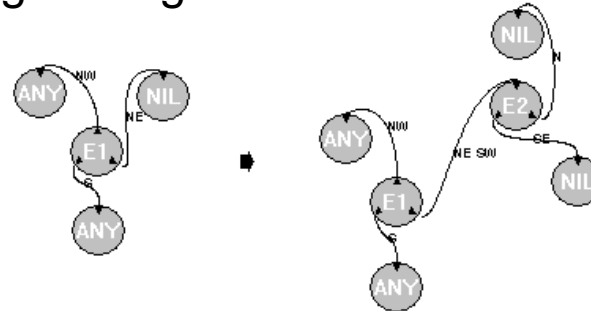triangular element of type-2
(upside-down triangle)

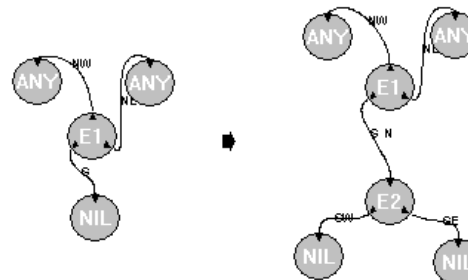# GRAPH GRAMMAR FOR TRIANGULAR MESH GENERATION

(PT1Left)

Graph grammar production generating
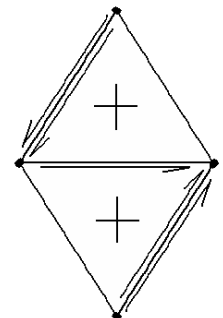neighboring element in the North-West direction

(PT1Right)

Graph grammar production generating
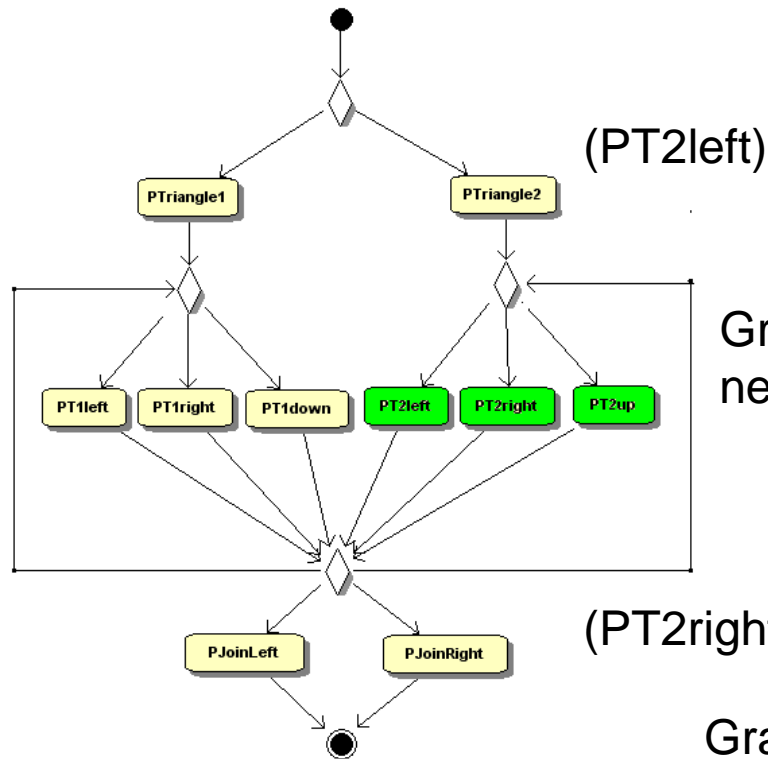neighboring element in the North-East direction
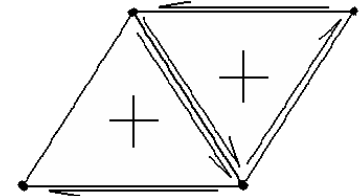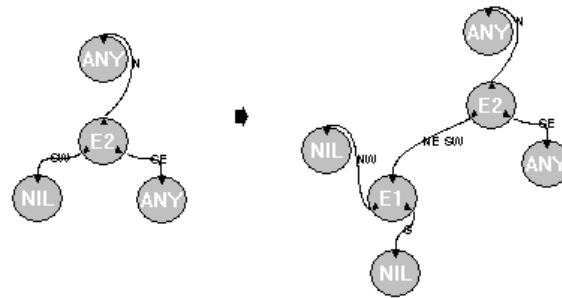
(PT1Down)

Graph grammar production generating
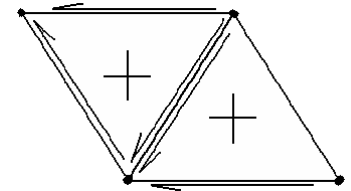neighboring element in the South direction

GRAPH GRAMMAR FOR TRIANGULAR MESH GENERATION

(PT2left)

Graph grammar production generating
neighboring element in the South-West direction

(PT2right)

Graph grammar production generating
neighboring element in the South-East
direction

(PT2up)

Graph grammar production generating
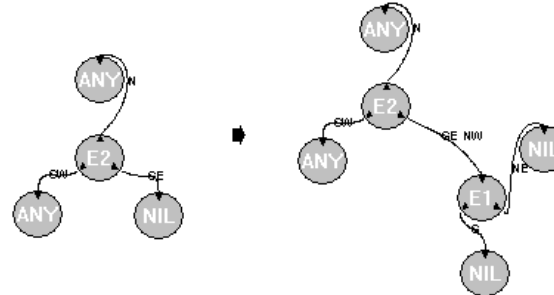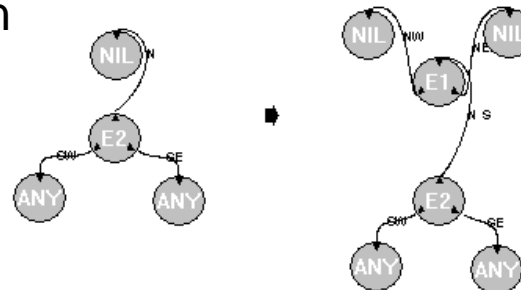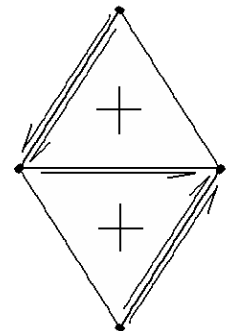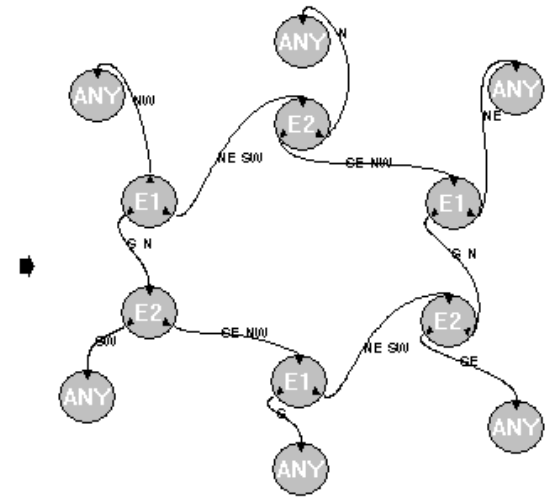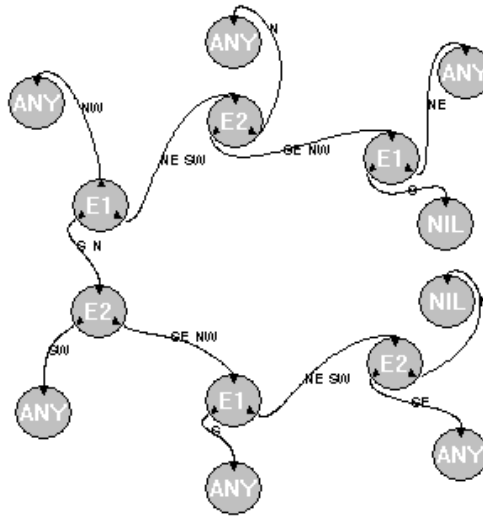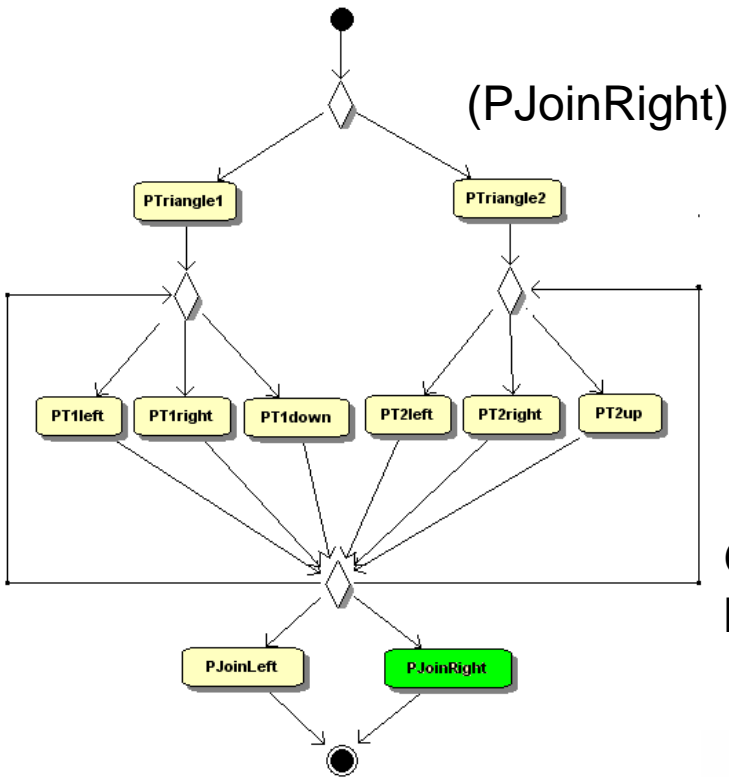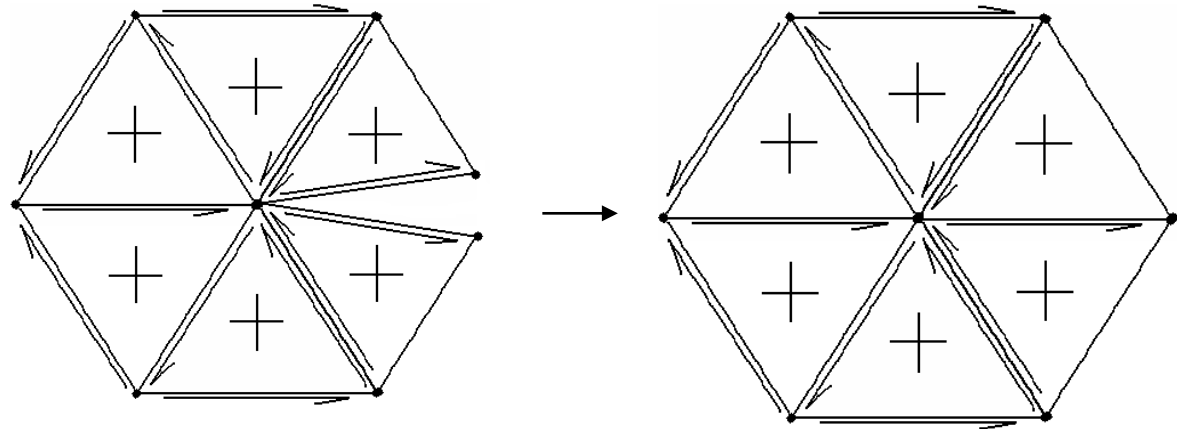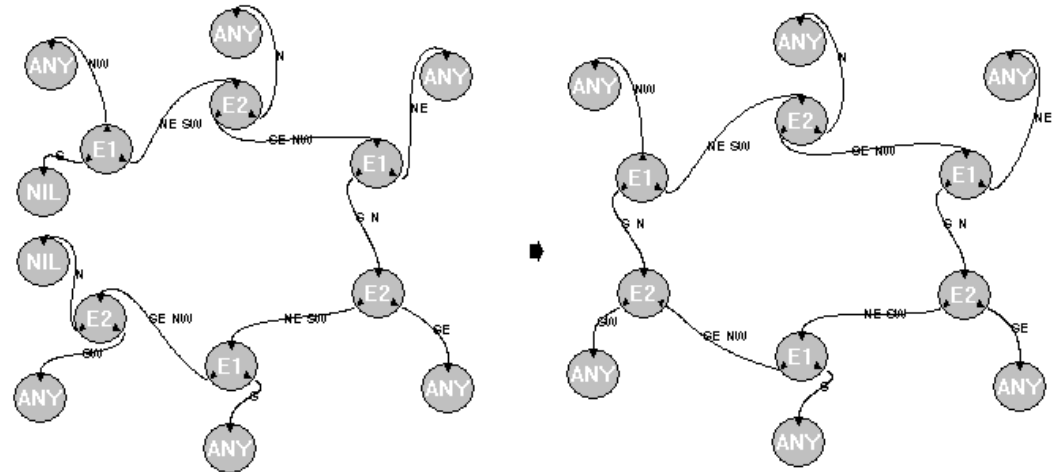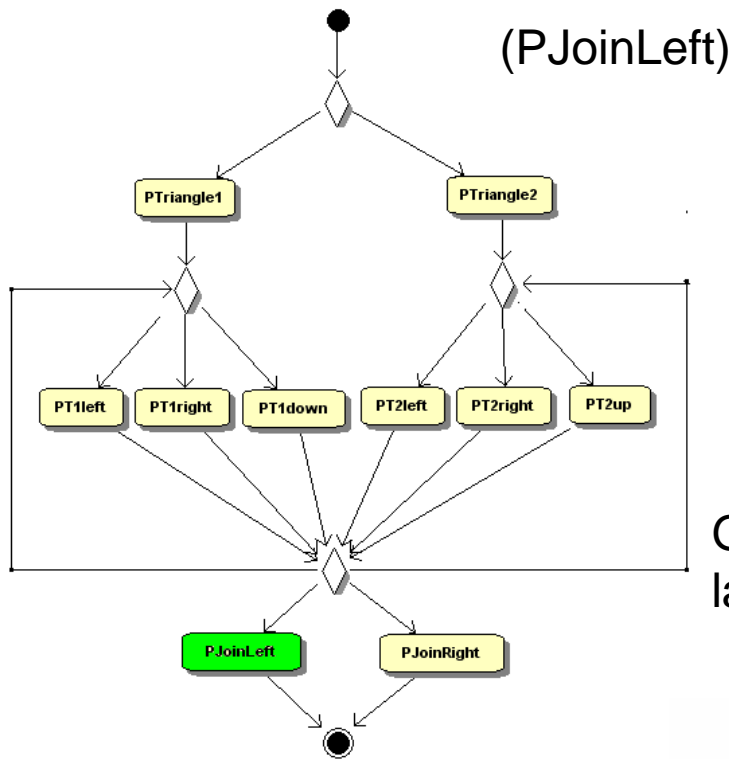neighboring element in the North direction

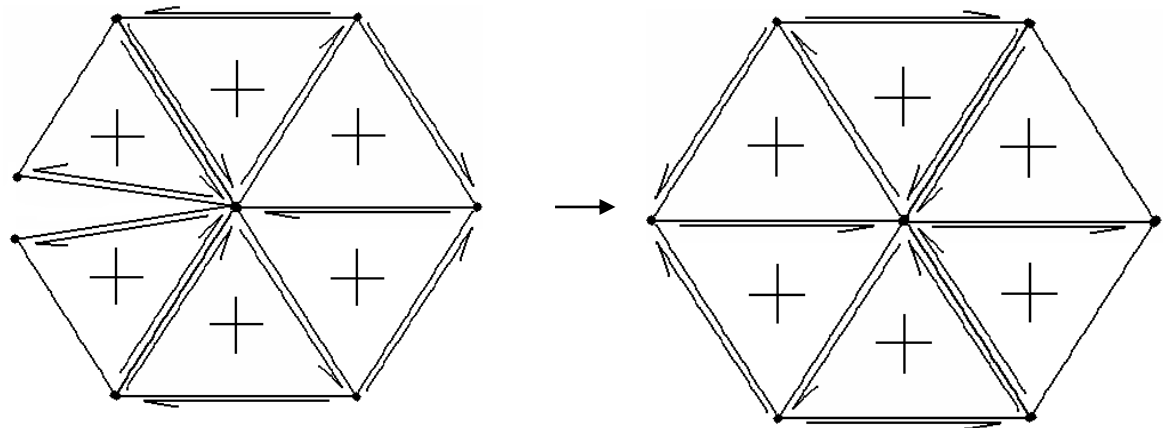# GRAPH GRAMMAR FOR TRIANGULAR MESH GENERATION

(PJoinRight)

Graph grammar production connecting two horizontal layers of generated elements in the West direction

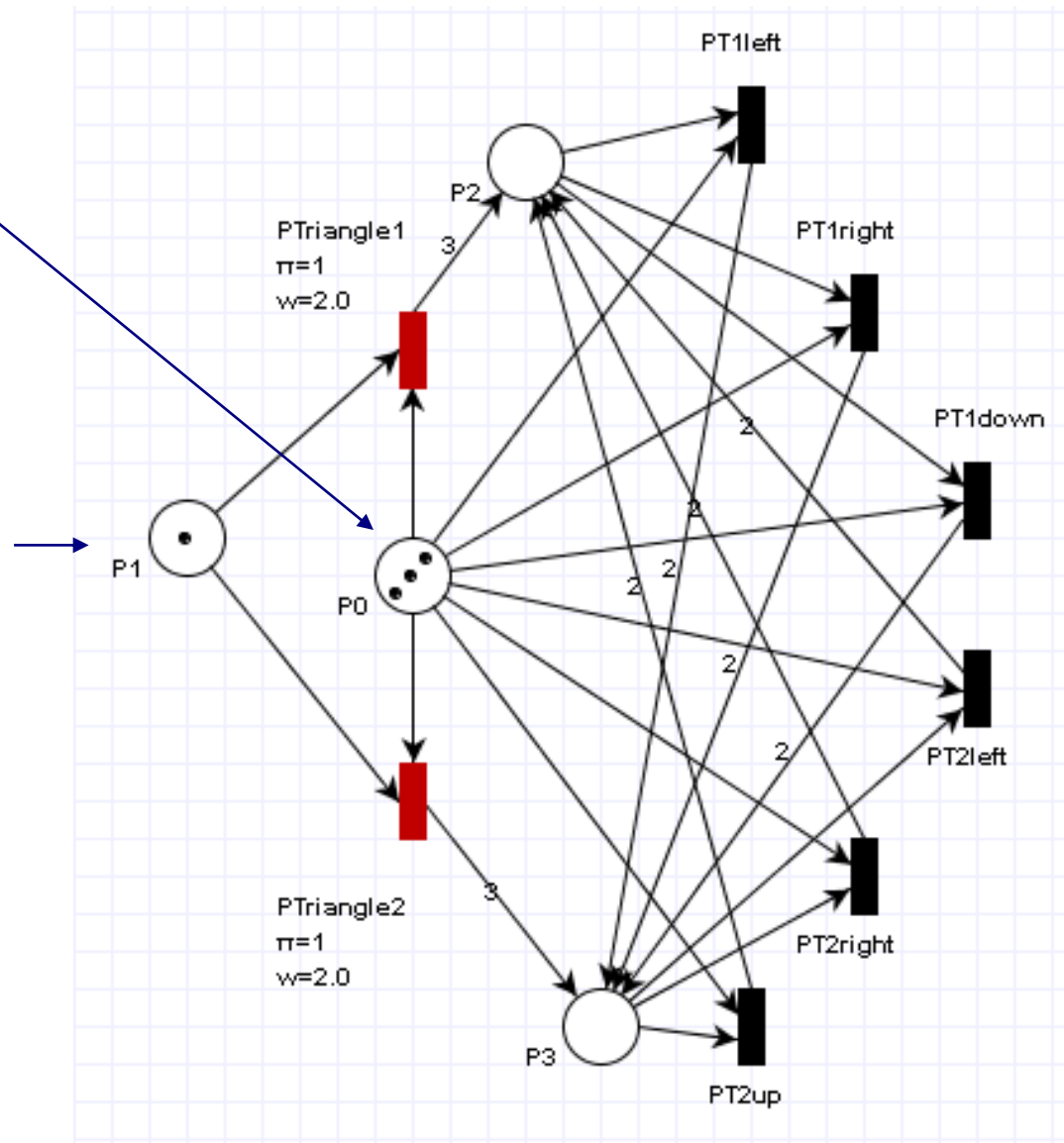# GRAPH GRAMMAR FOR TRIANGULAR MESH GENERATION

(PJoinLeft)

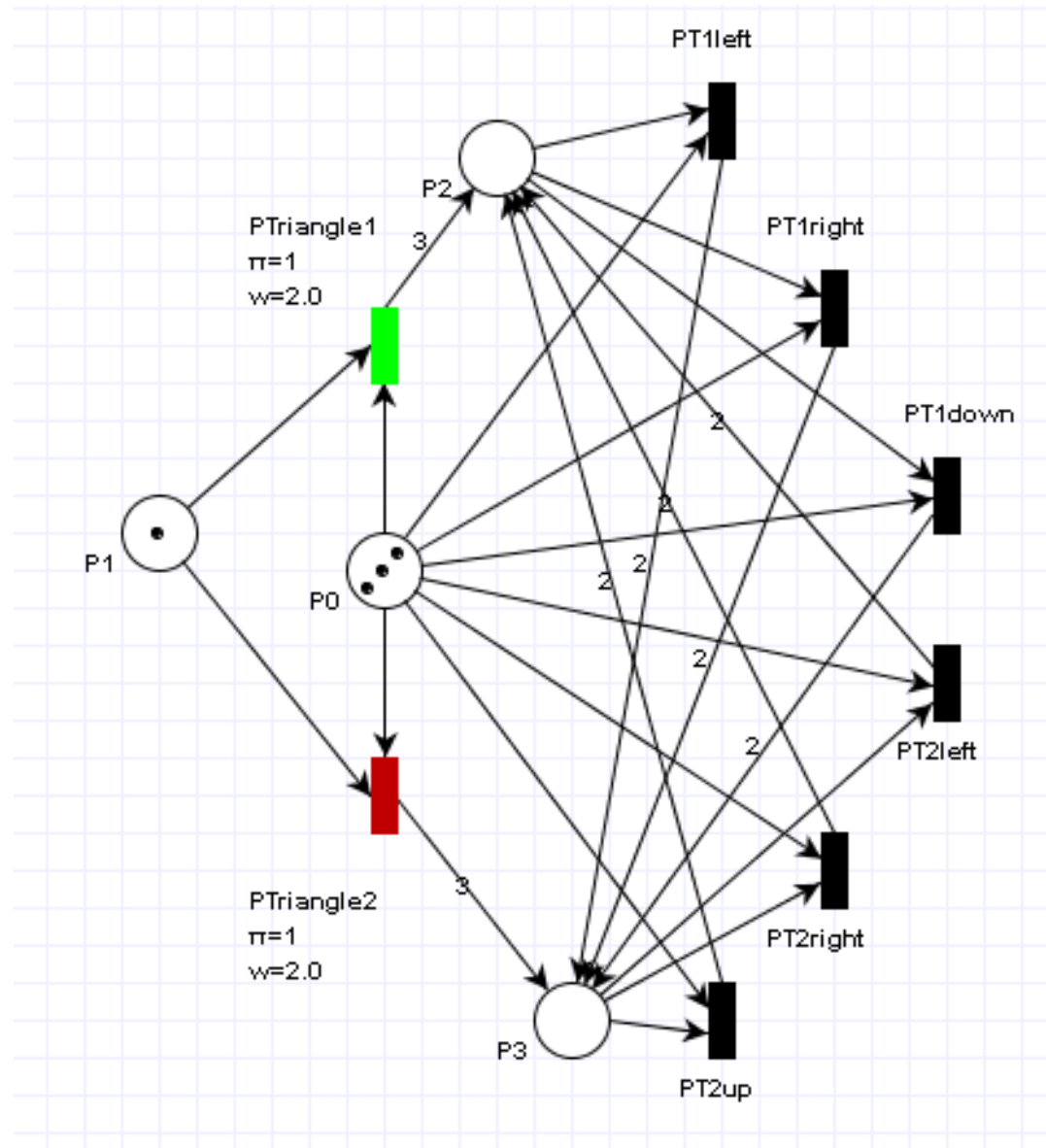Graph grammar production connecting two horizontal layers of generated elements in the East direction

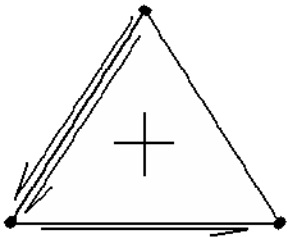# PETRI NET FOR TRIANGULAR MESH GENERATION

Number of tokens in the state P0 = number of elements to be generated
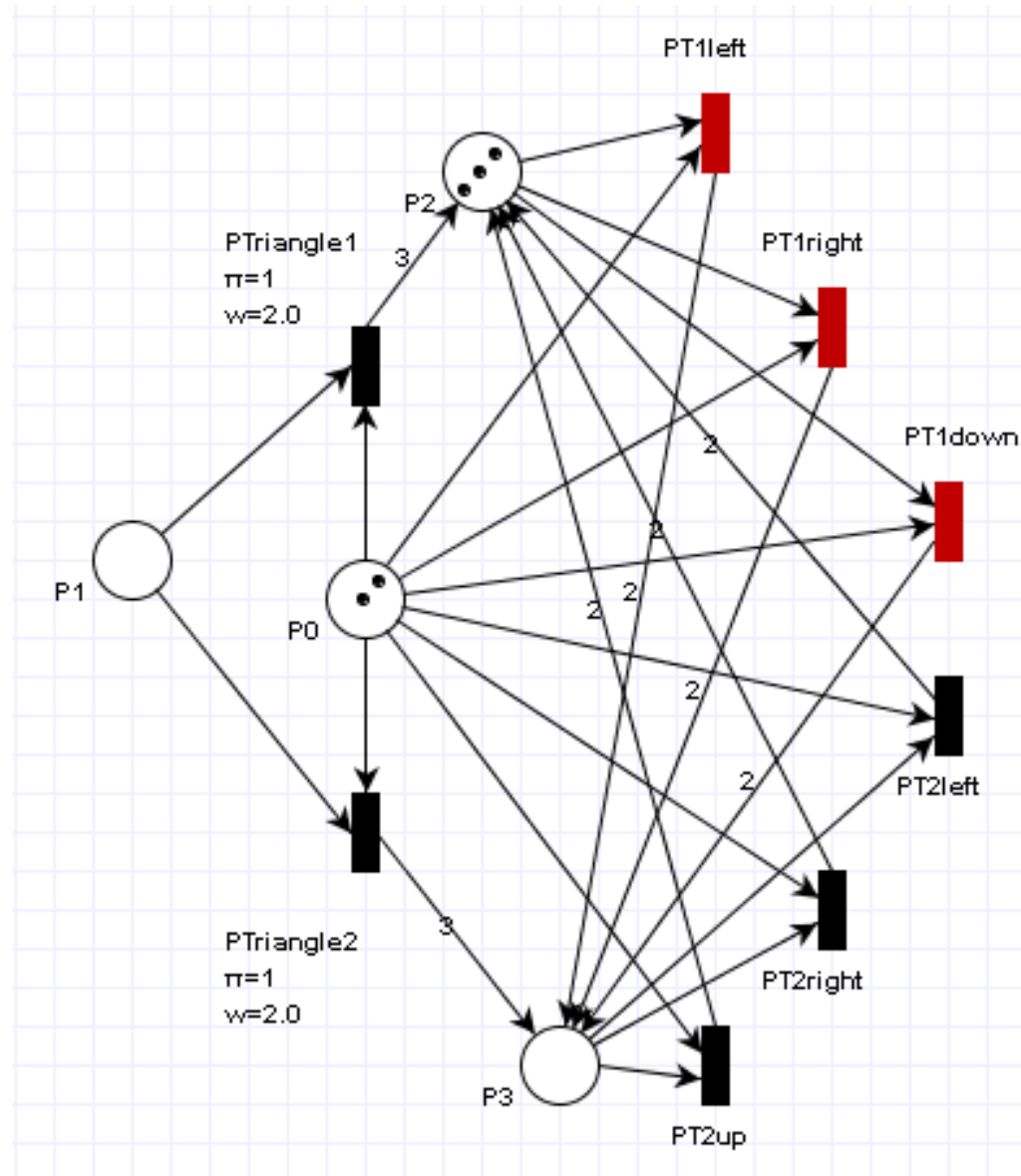
PETRI NET FOR TRIANGULAR MESH GENERATION

PETRI NET FOR TRIANGULAR MESH GENERATION
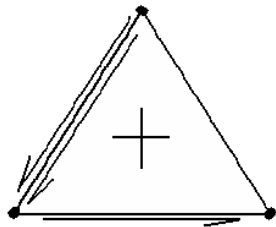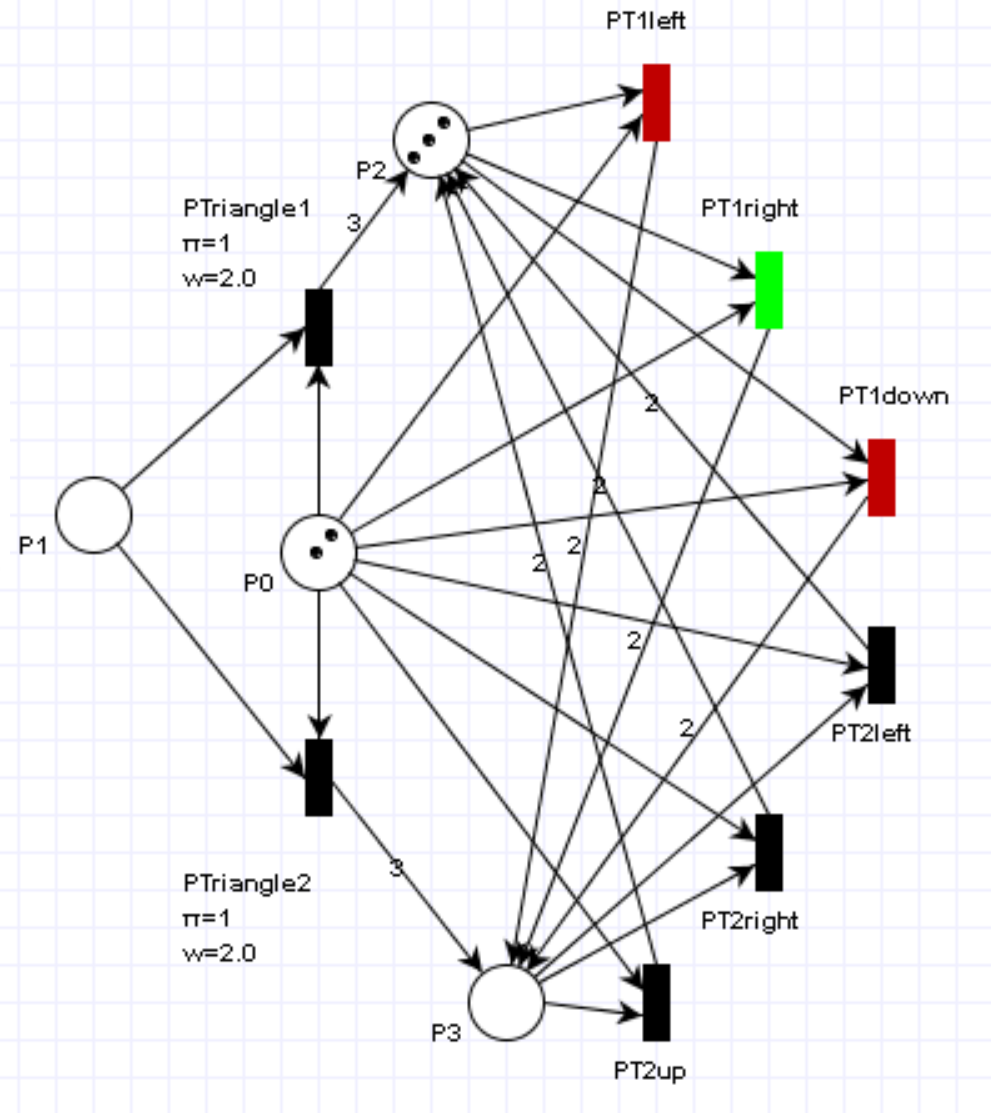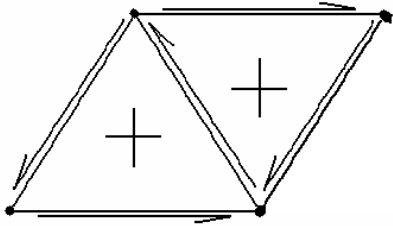
PETRI NET FOR TRIANGULAR MESH GENERATION

PETRI NET FOR TRIANGULAR MESH GENERATION
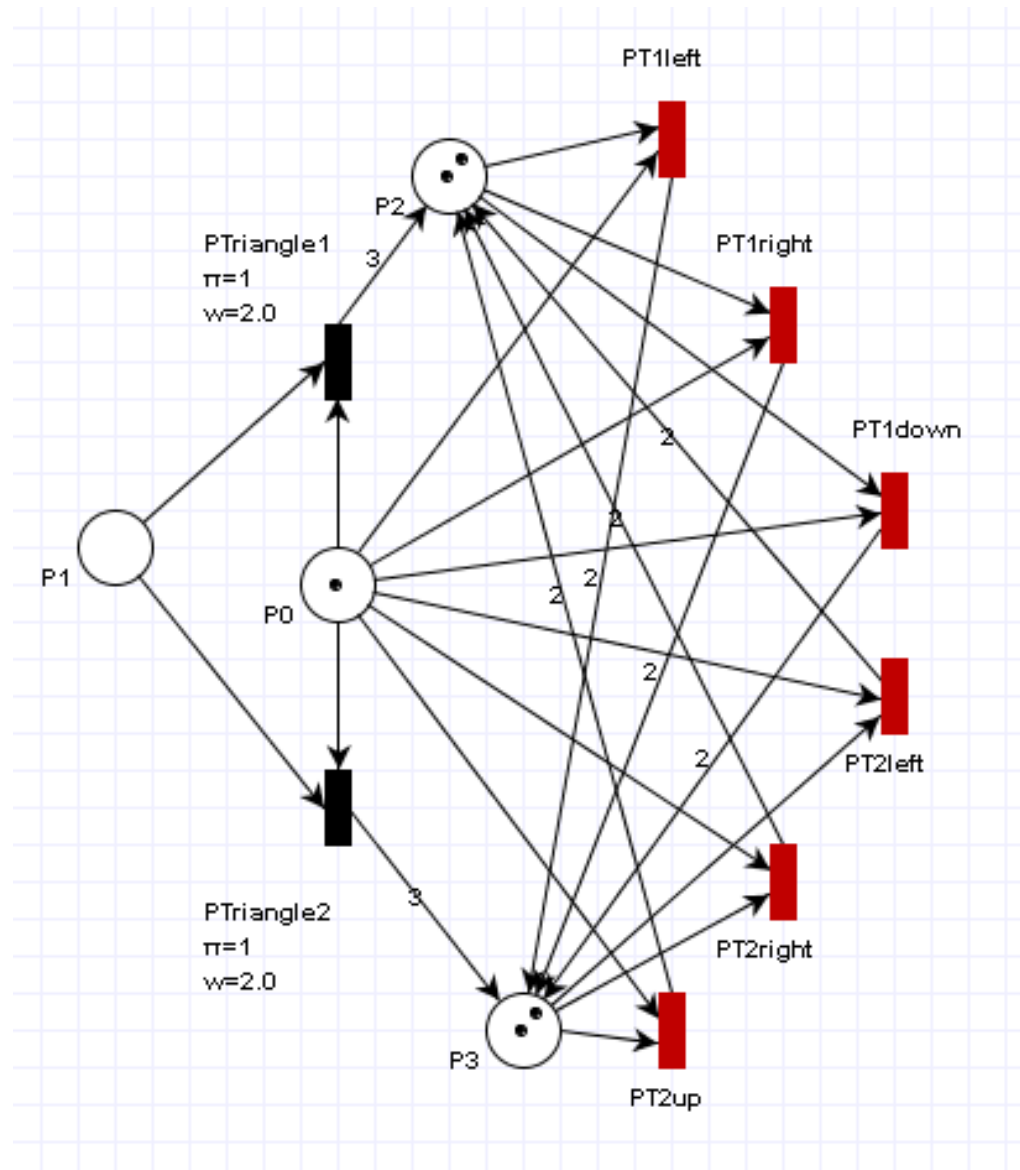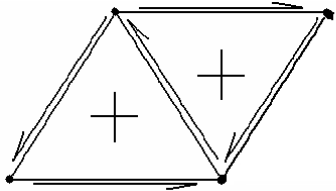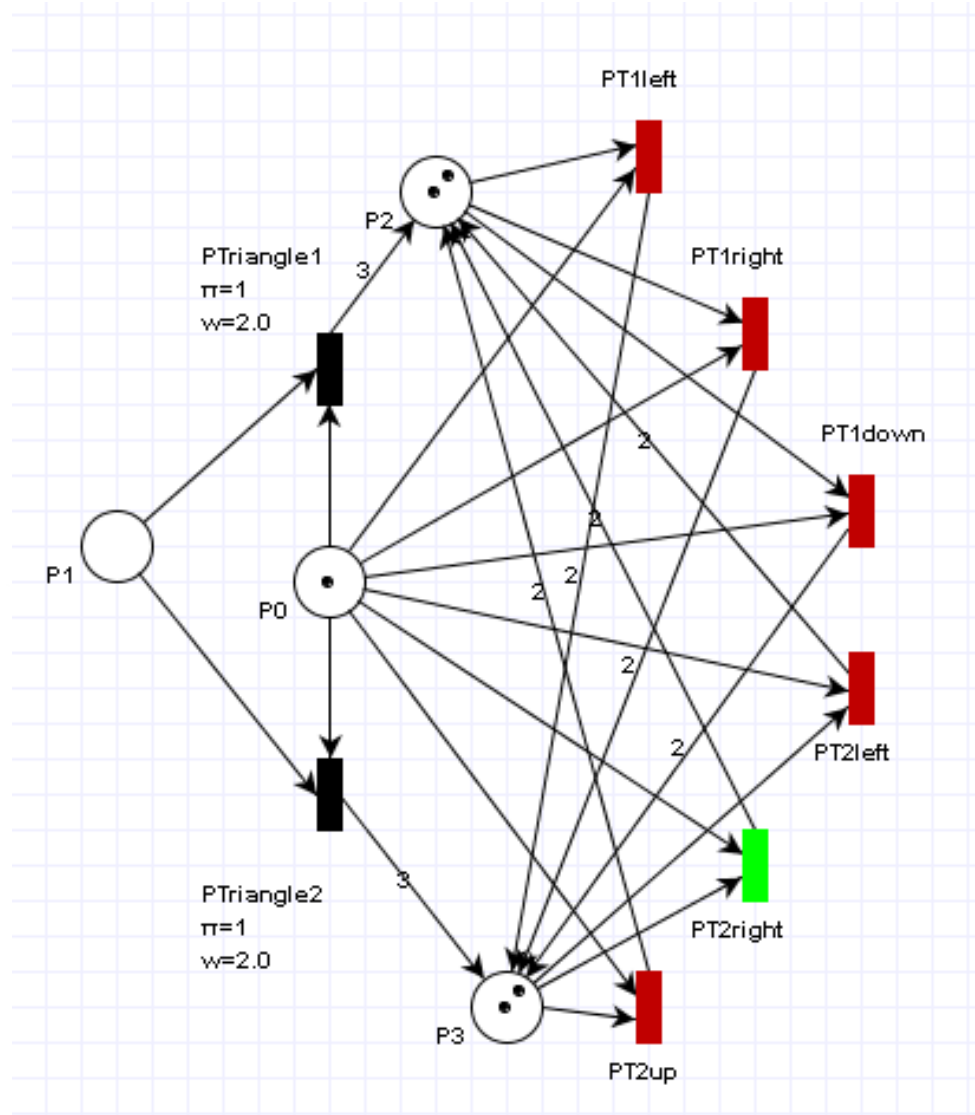
PETRI NET FOR TRIANGULAR MESH GENERATION

PETRI NET FOR TRIANGULAR MESH GENERATION
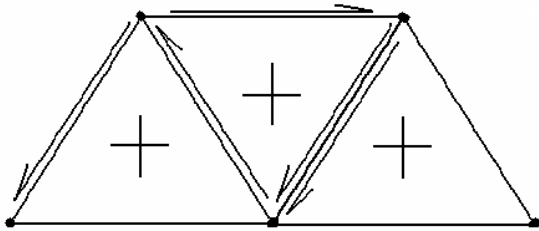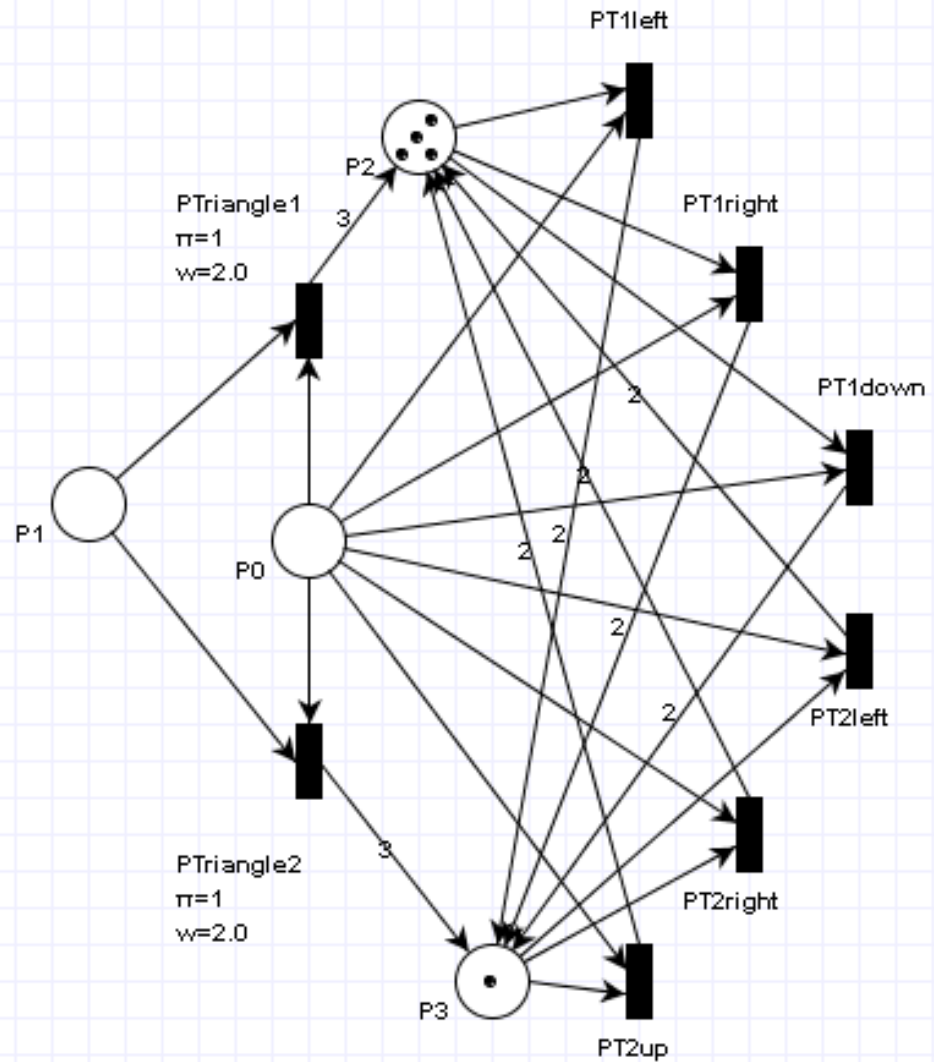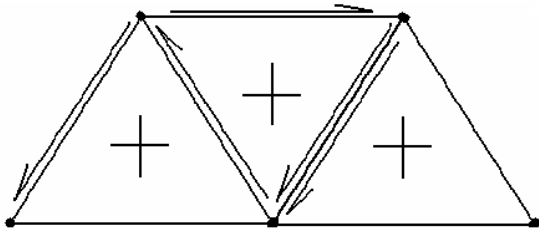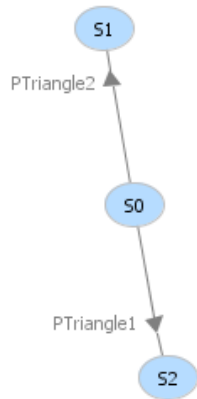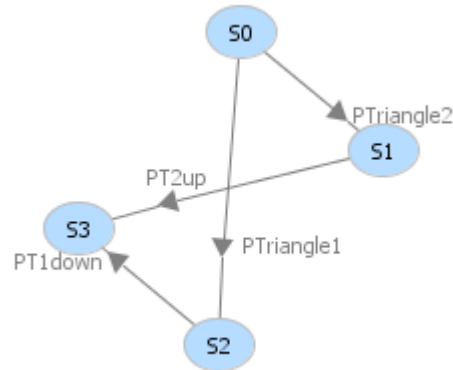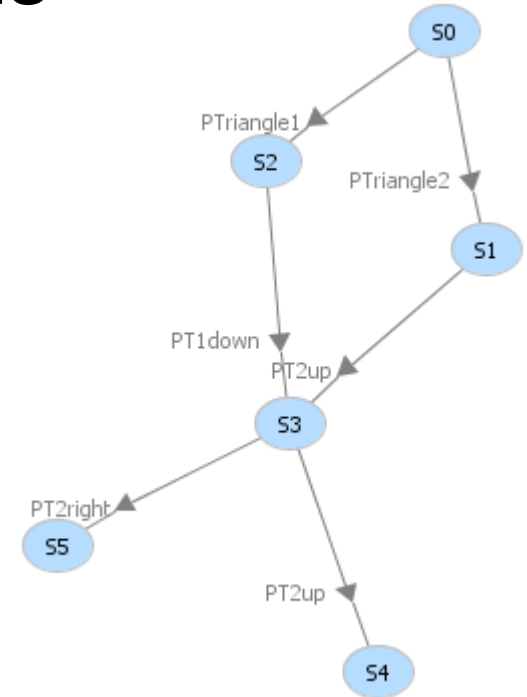
REACHABILITY GRAPHS

Reachability graph
for 1 element

Reachability graph
for 2 elements

Reachability graph
for 3 elements

Petri net state space analysis results

Bounded	true
Safe	false
Deadlock	true

Deadlock here means actually the end of the generation process