# Space Invaders Domain Analysis

**Constants**

- Images and sizes of tank, alien, and lasers
- Dimensions of board
- Dimensions of MTS
- different speeds of pieces
  - tank
  - lasers
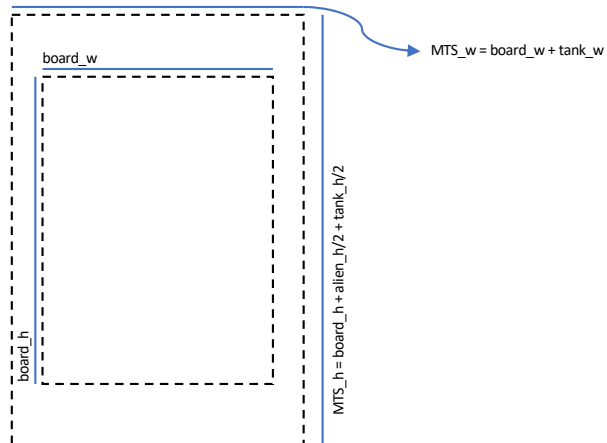  - aliens
- frequency of new aliens

**Changing**

- Positions of tank, alien, and lasers
  - x position of tank
  - y position of lasers
  - x and y positions of aliens
- # of lasers and aliens that are on the board

**Big-Bang**

- On-tick
  - move existing pieces
  - check for laser and alien intersections
  - generate new alien piece
- To-draw
  - draw all the pieces from the current state
- On-key
  - on space shoot a laser from the tank
  - on left or right key change the direction the tank moves
- Stop-when
  - alien reaches the bottom of the board

**Pictures**

board_w

MTS_w = board_w + tank_w

board_h

MTS_h = board_h + alien_h/2 + tank_h/2

Alien

Tank