



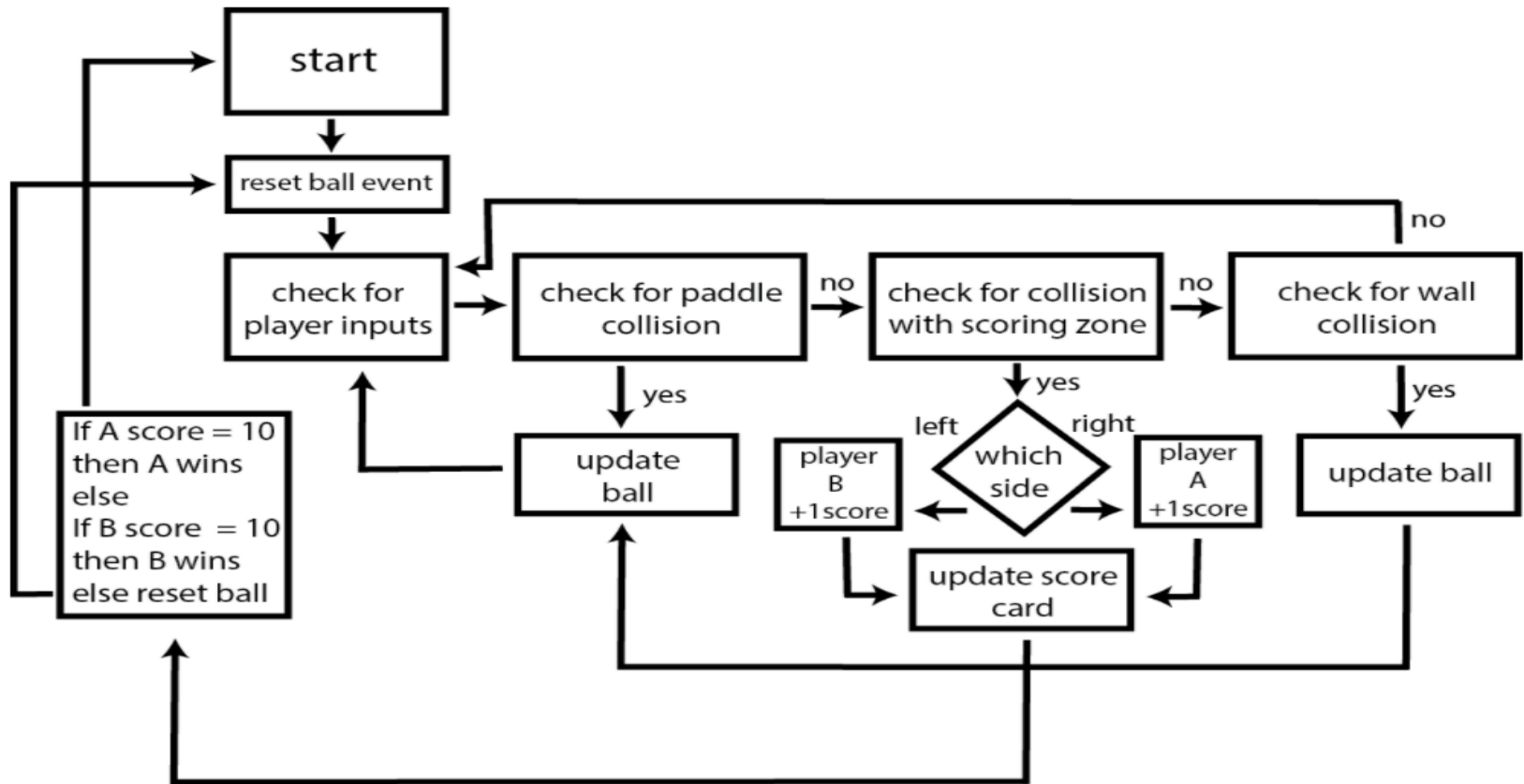
MV3500 Final Project

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Game Logic (Flowchart)



(Matissrak, 2013)

State Diagram

3. Agent-based Pong

Constants / Game Board

- top wall position
- bottom wall position
- mid-line position
- right scoring zone
- left scoring zone
- right score location
- left score location

State Variables

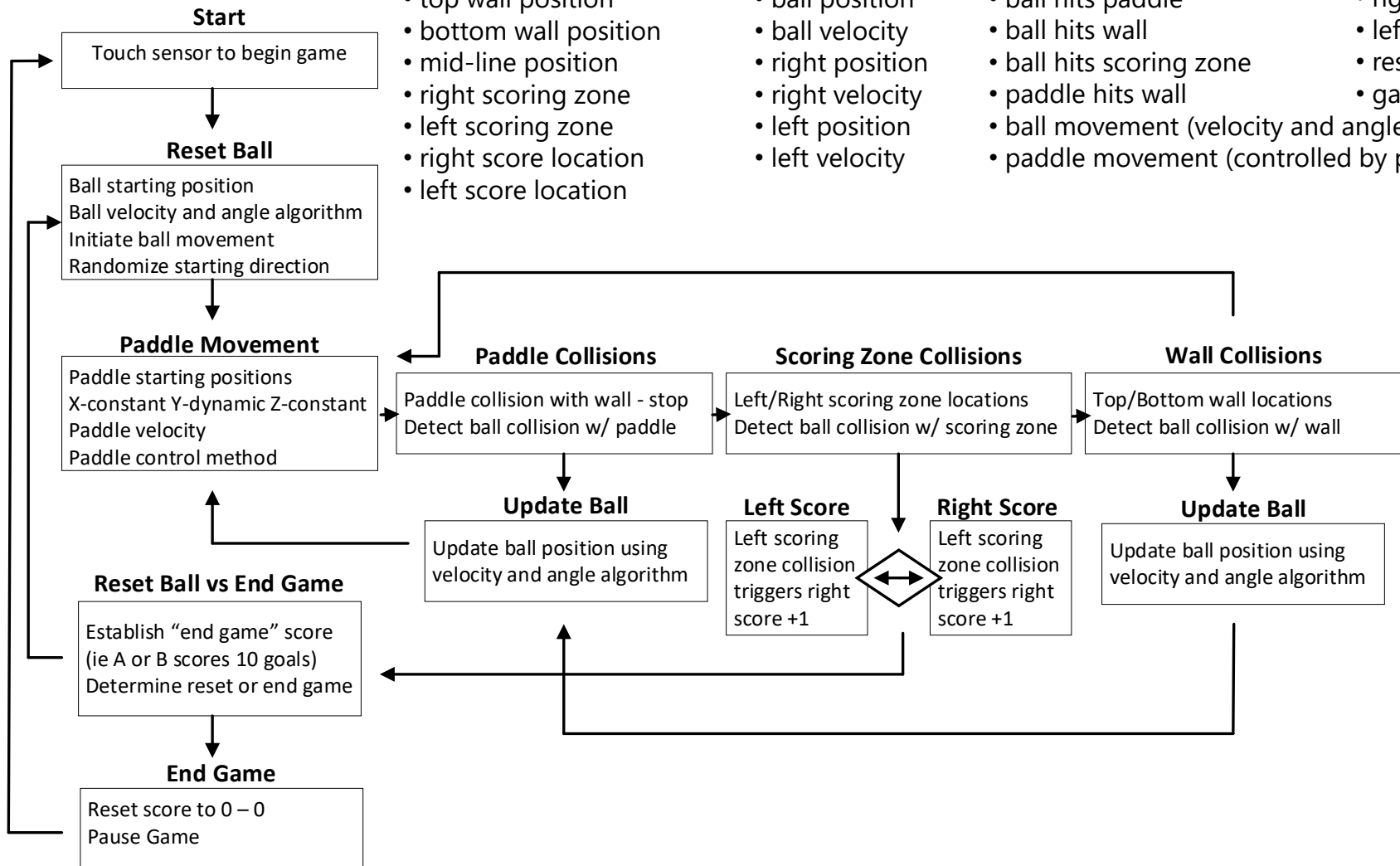
- ball position
- ball velocity
- right position
- right velocity
- left position
- left velocity

States/Collisions/Events

- ball hits paddle
- ball hits wall
- ball hits scoring zone
- paddle hits wall
- ball movement (velocity and angle of impact)
- paddle movement (controlled by player)

Outputs

- right score
- left score
- reset game
- game over



Canonical Game Progression

1. Precomputed (“canned”) demonstration of the game, Pong. Non-varying script using X3D position interpolators
2. Precomputed script, driven by human interaction. Non-varying left paddle and ball positions, with outcome determined by multiple touch sensor nodes
3. Agent-based Pong. Relationships between dynamic entities (right paddle, left paddle, ball) drive the simulation according to precomputed time steps.
4. A more intelligent agent enhances playability
5. Recording and playback. X3D position interpolators recorded for playback in other medium (ie DIS)
6. Live DIS inputs/outputs utilizing Espdu transform node

Questions?

