COZMO VS COZMO TIC-TAC-TOE

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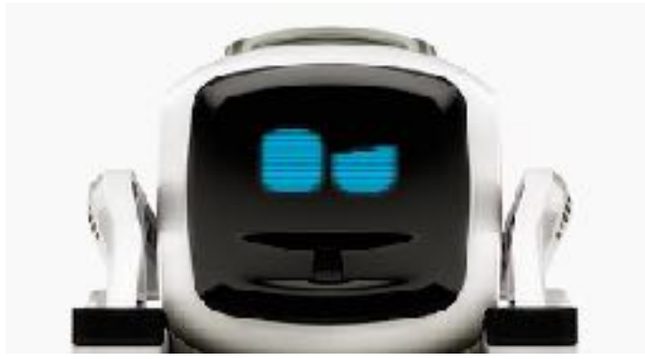
ABOUT

- This project consists of two cozmos that play each other in a game of tic-tac-toe

- Our cosmos use:
  - Markers to orient themselves and map the board
  - Parameterized AI to plan moves
  - Optimized path planner to used to move chips
  - Communication over wifi

DIFFICULTIES

- Path planning to the intended location with the chips



- Specifically:
  - The marker's orientation was not reliable, so positions were not reliable.
  - Path planner did not account for objects being pushed.
  - Limited communication capability - cannot share world maps.

INTERESTING SOLUTIONS

- Standardizing playing field
  - initial chip positions
  - start pose

- Self-correcting chip locations

- Using wifi connection to synchronize world-maps. Cozmos wait on each other for new:
  - states of the board (moves made)
  - corrections

FURTHER WORK

- Using computer vision to detect and avoid chips
- Shared world map
- Path planner that places objects in the correct position
- More landmarks for accurate positions and orientations
- Non-standardized board