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B-Human's Approach for the Shared Autonomy Challenge

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Cyber-Physical Systems
Multi-Sensor Interactive Systems

- UDP communication between robot and PC

  - Robot: JPEG images, game state, joint angles, IMU state, self-localization, ball/obstacle models

  - PC: Joystick state or control commands

- Over-the-shoulder view, joystick control

  - Omnidirectional walk, dribble in direction, kick to position, pass to teammate, head control

- Top-down view, mouse/keyboard control

  - Walk/dribble/kick to position, pass to teammate, head control

- Manual strategy switching

  - Attacker: Allow kicking at goal or not

  - Defender: Goal keeper or second field player

  - Via communication channel for indirect kick rule
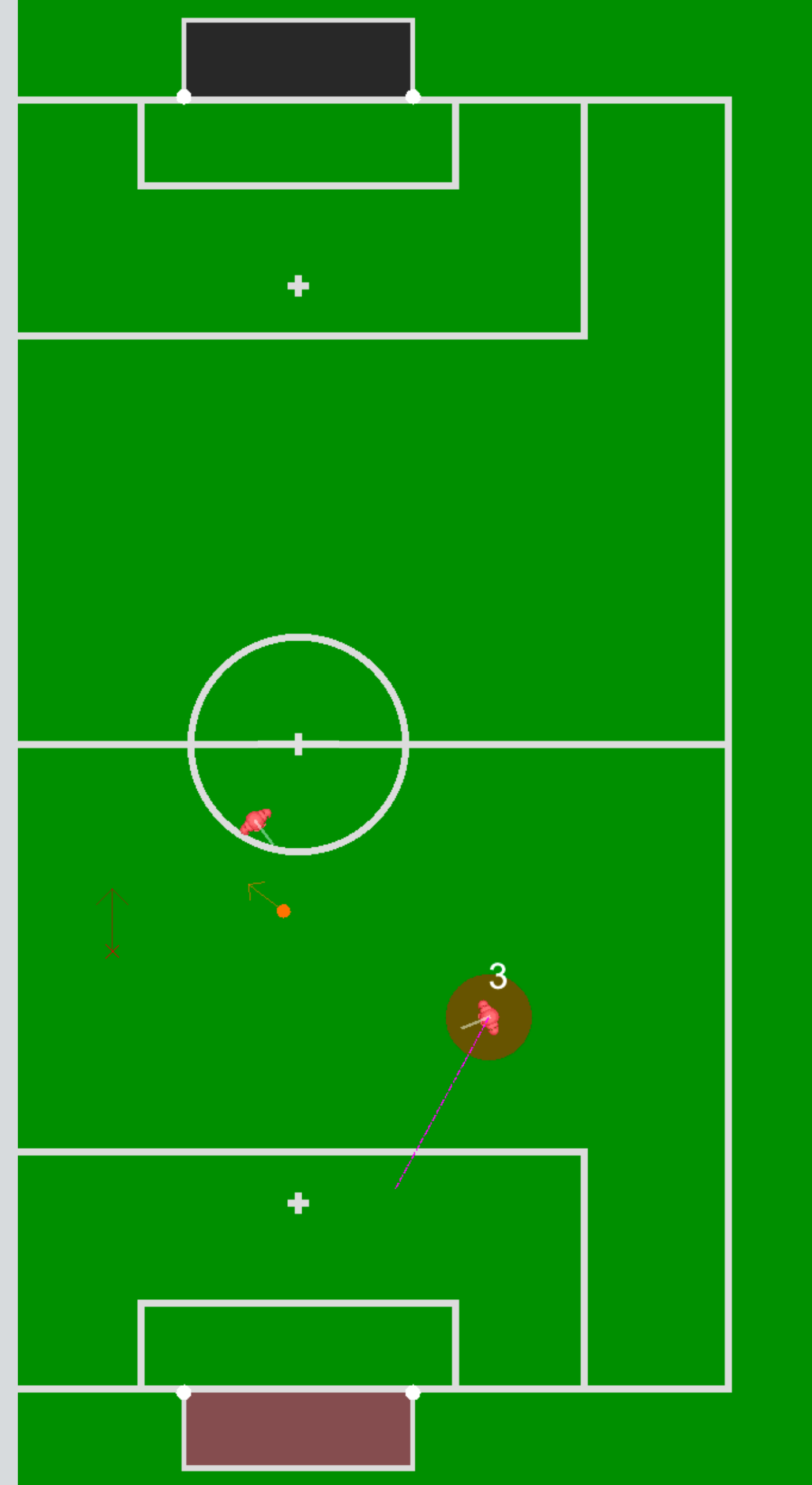
☐ allow goals

Controls:
Arrows: head control
Space: deactivate head control
W + Click: kick to target
E + Click: dribble to target
R: pass to teammate
S: stand
Q: switch strategy