Ackermann Steering Controller

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Analysis

+ converge(): void

UserInterface

- target_speed: double
- target_heading: double
- + getTargets(): void
- + getTargetSpeed(): double
- + getTargetHeading(): double

Robot

- wheel_base: double
- wheel_track: double
- wheel_radius: double
- com_offset: double
- robot_heading: double
- robot_speed: double
- inner_wheel_velocity: double
- outer_wheel_velocity: double
- + drive(double,double): void



Controller

- max_steering_angle: double
- Kp_theta: double
- Ki_theta: double
- Kd_theta: double
- Kp_s: double
- Ki_s: double
- Kd_s: double
- dt: double
- target_speed: double
- target_heading: double
- speed_error: std::vec<double>
- heading_error: std::vec<double>
- + computeError(double, double): void
- + computeSteering(): double

Visualization

+ show(double,double): void

+ computeThrottle(): double

+ setTargets(): void