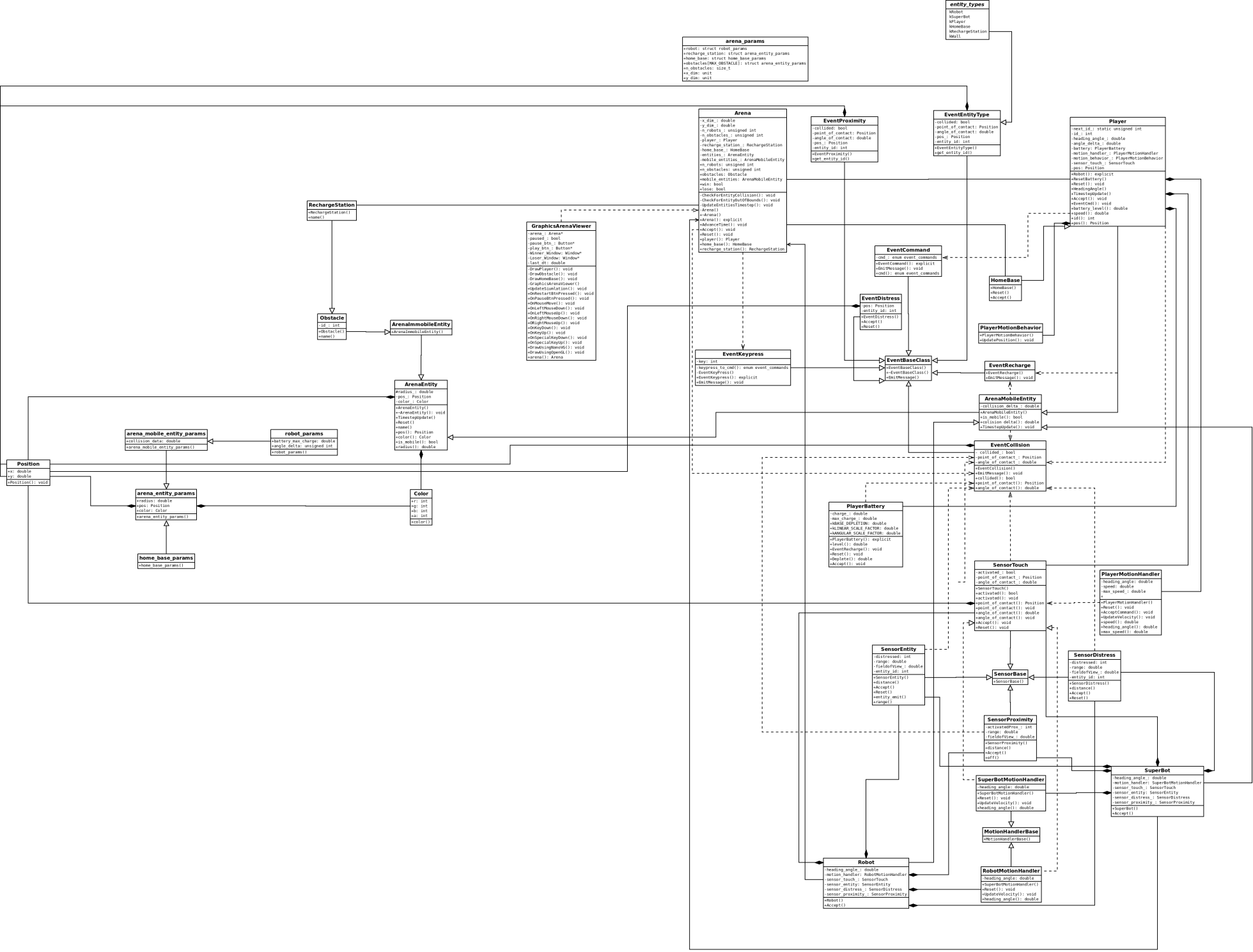
entity_types
kRobot
kSuperBot
kPlayer
kHomeBase
kRechargeStation
kWall
arena_params
+robot: struct robot_params
+recharge_station: struct arena_entity_params
+home_base: struct home_base_params
+obstacles[MAX_OBSTACLE]: struct arena_entity_params
+n_obstacles: size_t
+x_dim: unit
+y_dim: unit
Arena
-x_dim_: double
-y_dim_: double
-n_robots_: unsignnad int
-n_obstacles_: unsigned int
-player_: Player
-recharge_station_: RechargeStation
-home_base_: HomeBase
-entities_: ArenaEntity
-mobile_entities_: ArenaMobileEntity
+n_robots: unsigned int
+n_obstacles: unsigned int
+obstacles: Obstacle
+mobile_entities: ArenaMobileEntity
+win: bool
+lose: bool
-CheckForEntityCollision(): void
-CheckForEntityOutOfBounds(): void
-UpdateEntitiesTimestep(): void
-Arena()
+~Arena()
+Arena(): explicit
+AdvanceTime(): void
+Accept(): void
+Reset(): void
+player(): Player
+home_base(): HomeBase
+recharge_station(): RechargeStation
EventProximity
-collided: bool
-point_of_contact: Position
-angle_of_contact: double
-pos_: Position
-entity_id: int
+EventProximity()
-get_entity_id()
EventEntityType
-collided: bool
-point_of_contact: Position
-angle_of_contact: double
-pos_: Position
-entity_id: int
+EventEntityType()
+get_entity_id()
Player
-next_id_: static unsigned int
-id_: int
-heading_angle_: double
-angle_delta_: double
-battery: PlayerBattery
-motion_handler_: PlayerMotionHandler
-motion_behavior_: PlayerMotionBehavior
-sensor_touch_: SensorTouch
-pos: Position
+Robot(): explicit
+ResetBattery()
+Reset(): void
+HeadingAngle()
+TimestepUpdate()
+Accept(): void
+EventCmd(): void
+battery_level(): double
+speed(): double
+id(): int
+pos(): Position
RechargeStation
+RechargeStation()
+name()
GraphicsArenaViewer
-arena_: Arena*
-paused_: bool
-pause_btn_: Button*
-play_btn_: Button*
-Winner_Window: Window*
-Loser_Window: Window*
-last_dt: double
-DrawPlayer(): void
-DrawObstacle(): void
-DrawHomeBase(): void
-GraphicsArenaViewer()
+UpdateSimulation(): void
+OnRestartBtnPressed(): void
+OnPauseBtnPressed(): void
+OnMouseMove(): void
+OnLeftMouseDown(): void
+OnLeftMouseUp(): void
+OnRightMouseDown(): void
+ORightMouseUp(): void
+OnKeyDown(): void
+OnKeyUp(): void
+OnSpecialKeyDown(): void
+OnSpecialKeyUp(): void
+DrawUsingNanoVG(): void
+DrawUsingOpenGL(): void
+arena(): Arena
EventCommand
-cmd_: enum event_commands
+EventCommand(): explicit
+EmitMessage(): void
+cmd(): enum event_commands
HomeBase
+HomeBase()
+Reset()
+Accept()
EventDistress
-pos: Position
-entity_id: int
+EventDistress()
+Accept()
+Reset()
PlayerMotionBehavior
+PlayerMotionBehavior()
+UpdatePosition(): void
Obstacle
-id : int
+Obstacle()
+name()
ArenaImmobileEntity
+ArenaImmobileEntity()
EventKeypress
-key: int
-keypress_to_cmd(): enum event_commands
-EventKeyPress()
+EventKeypress(): explicit
+EmitMessage(): void
EventBaseClass
+EventBaseClass()
+~EventBaseClass()
+EmitMessage()
EventRecharge
+EventRecharge()
+EmitMessage(): void
ArenaEntity
#radius_: double
-pos_: Position
-color_: Color
+ArenaEntity()
+~ArenaEntity(): void
+TimestepUpdate()
+Reset()
+name()
+pos(): Position
+color(): Color
+is_mobile(): bool
+radius(): double
ArenaMobileEntity
-collision_delta_: double
+ArenaMobileEntity()
+is_mobile(): bool
+collision_delta(): double
+TimestepUpdate(): void
arena_mobile_entity_params
+collision_data: double
+arena_mobile_entity_params()
robot_params
+battery_max_charge: double
+angle_delta: unsigned int
+robot_params()
Position
+x: double
+y: double
+Position(): void
EventCollision
-collided_: bool
-point_of_contact_: Position
-angle_of_contact_: double
+EventCollision()
+EmitMessage(): void
+collided(): bool
+point_of_contact(): Position
+angle_of_contact(): double
arena_entity_params
+radius: double
+pos: Position
+color: Color
+arena_entity_params()
Color
+r: int
+g: int
+b: int
+a: int
+color()
PlayerBattery
-charge_: double
-max_charge_: double
+kBASE_DEPLETION: double
+kLINEAR_SCALE_FACTOR: double
+kANGULAR_SCALE_FACTOR: double
+PlayerBattery(): explicit
+level(): double
+EventRecharge(): void
+Reset(): void
+Deplete(): double
+Accept(): void
SensorTouch
-activated_: bool
-point_of_contact_: Position
-angle_of_contact_: double
+SensorTouch()
+activated(): bool
+activated(): void
+point_of_contact(): Position
+point_of_contact(): void
+angle_of_contact(): double
+angle_of_contact(): void
+Accept(): void
+Reset(): void
PlayerMotionHandler
-heading_angle: double
-speed: double
-max_speed_: double
+
+PlayerMotionHandler()
+Reset(): void
+AcceptCommand(): void
+UpdateVelocity(): void
+speed(): double
+heading_angle(): double
+max_speed(): double home_base_params
+home_base_params()
SensorEntity
-distressed: int
-range: double
-fieldofView_: double
-entity_id: int
+SensorEntity()
+distance()
+Accept()
+Reset()
+entity_emit()
+range()
SensorBase
+SensorBase()
SensorDistress
-distressed: int
-range: double
-fieldofView_: double
-entity_id: int
+SensorDistress()
+distance()
+Accept()
+Reset()
SensorProximity
-activatedProx_: int
-range: double
-fieldofView_: double
+SensorProximity()
+distance()
+Accept()
+off()
SuperBot
-heading_angle_: double
-motion_handler: SuperBotMotionHandler
-sensor_touch_: SensorTouch
-sensor_entity: SensorEntity
-sensor_distress_: SensorDistress
-sensor_proximity_: SensorProximity
+SuperBot()
+Accept()
SuperBotMotionHandler
-heading_angle: double
+SuperBotMotionHandler()
+Reset(): void
+UpdateVelocity(): void
+heading_angle(): double
MotionHandlerBase
+MotionHandlerBase()
Robot
-heading_angle_: double
-motion_handler: RobotMotionHandler
-sensor_touch_: SensorTouch
-sensor_entity: SensorEntity
-sensor_distress_: SensorDistress
-sensor_proximity_: SensorProximity
+Robot()
+Accept()
RobotMotionHandler
-heading_angle: double
+SuperBotMotionHandler()
+Reset(): void
+UpdateVelocity(): void
+heading_angle(): double