Position

float x
float y
float z

SimmulationModule

+ Environment * environment
+ unsigned time

+ SimmulationModule()
+ void run()
+ void sendData()

Environment

+ vector <Object *> objects
+ vector >Sensor Observer *> sensors

+ Environment()
+ void update()
+ vector <Vect3f> getData()

Object

+ unsigned id
+ Vect3f position
+ Curve * curve
+ vector <SensorObserver * > * sensors

+ void update (unsigned time)
+ void notify ()
+ void setObserver (vector <SensorObserver *> *)

SensorObserver

+ SensorObserverImpl()
+ ~SensorObserverImpl()
+ void update (Object *)
+ vector <Vect3f> getPositions()

Curve

+ Curve()
+ ~Curve()
+ Vect3f getPosition(unsigned time)

SensorObserverImpl

+ list <Object * > objects
+ float deviation

+ SensorObserverImpl()
+ ~SensorObserverImpl()
+ void update (Object *)
+ Vect3f makeNoise(Object *)
+ vector <Vect3f> getPositions()

BalisticCurve

Vect3f velocty0
float gravity

+ BalisticCurve()
+ ~BalisticCurve()
+ Vect3f getPosition(unsigned time)

Line

Vect3f velocty0

+ Line()
+ ~Line()
+ Vect3f getPosition(unsigned time)

FilterModule

+ Filter * filter;

+ FilterModule()
+ void run()
+ void receiveData()
+ void sendData()

Track

unsigned id
Vect3f current
Vect3f previous
Vect3f estimated
Parameters parameters

KalmanFilter

vector <Track *> tracks

+ Filter()
+ void estimate()
+ vector <Vect3f> getData()

Parameters

ComparatorModule

+ vector <PassedObject> original
+ vector <PassedObject> filtered

+ ComparatorModule()
+ void run()
+ void receiveData()
+ void sendData()
+ compare()

PassedObject

unsigned id
Vect3f position

FilterError

+ float computeError (vector <PassedObject>, vector <PassedObject>)

ConcreteError

+ float computeError (vector <PassedObject>, vector <PassedObject>)