# UniSim

MainView->MainScean

ShipAgent

### ShaderObject(:QOpenGLExtraFunctions)

用OpenGL

### SimulationManager(:QObject)

update():返回ret ret=1:这轮仿真结束 ret =0:这轮仿真还在继续

ret = simulation\_.update(interval); 一直执行这个函数直到仿真过程结束(SimulationModule类)

ret = -1:

### SimulationModule

### SimulationObjects

### Entity

load dll文件内容

return instance属性 instance指针置空

### MissileIntel

id, target\_id, Model Type, position, position\_init, speed, hori\_direction, vert\_driection, damage radius

### TargetIntel

Id, Model Type, position, position\_init, speed, hori\_direction, vert\_driection

### CurrentGlobalData(:ICurrentData)

all\_target\_intels, all\_missile\_intels

all\_target\_status, all\_missile\_status

target\_intels\_of\_agents, missile\_intels\_of\_agents

### GlobalAgent(:IglobalAgent)

update(elapsed\_time)->update\_intel(),update\_status(),update\_perception()

update\_intel():更新各个智能体的坐标、速度，水平方向和垂直方向

update\_status():以导弹为主循环体，依次循环判断导弹是否击中船只和飞机等等

update\_perceptions() 更新追踪目标？

### IGlobalAgent(:IAgentBase)

属性：

CurrentGlobalData

ModelParam

CurrentData\*

行为：

set\_model\_param(const Platform::ModelParam& model\_param)

bind\_current\_data(const Platform::CurrentData\* current\_data)

Current::CurrentGlobalData& get\_current\_data()

Platform::TargetIntel get\_target\_intel\_by\_id(int target\_id)

Platform::MissileIntel get\_missile\_intel\_by\_id(int missile\_id)

initialize()

### IShipAgent(:public IAgentBase)

属性：

ShipParameter，CurrentShipData，SystemPreference

ITacticModule

IBombModule，

IJammingDevice vector容器的capacity初始化resize为6

IGlobalAgent\*

IEnvironment,

CameraObjectPtr

ControllerShip\

动作：

构造函数：加载干扰策略tactic\_entity

### ShipAgent(:public IShipAgent)

update

detect\_threat 检测威胁 威胁距离<发射距离时发射