



RenderWare A.I. 3.7 offers developers full, customizable access to the most innovative, game specific A.I. SDK, that will help them populate all genre of game worlds and deliver extremely high levels of life-like behavior and intelligent interaction between characters and game environments.

RenderWare A.I. is the first optimized, multi-platform A.I. middleware solution that's designed solely for next-generation game development. **RenderWare A.I.** is available in stand-alone form, as well as a fully leveraging component of **RenderWare Platform** and **RenderWare Studio**.

The **RenderWare A.I. 3.7** SDK is comprised of the following core components:

Perception

■ World modeling

Non-player characters require data to move intelligently, identify hiding positions and more generally analyze 3D topology. **RenderWare A.I.** proposes an optimized modeling relevant from a behavior perspective: the PathData. They are the equivalent of polygons for rendering or collision meshes for physics. PathData are generated automatically and can be edited for manual modification.

■ 3D topology dynamic analyzer

In addition to traditional perception managers (visibility, sound, smell), **RenderWare A.I.** offers a revolutionary functionality to analyze, in real time and dynamically, 3D topology.

Features:

- You can identify all potential locations from where an enemy can easily shoot and hide.
- The 3D topology analyzer will dynamically identify all potential locations from where one can shoot at a VIP. You will then be able to position body guards in order to cover these threats.
- The 3D topology analyzer will dynamically identify the different ways to reach enemies to organize an opposite flank assault.
- To properly position your camera, the 3D topology analyzer will identify the best perspective that gives you the best understanding of scene topology.

3D Pathfinding

RenderWare A.I. deploys complete 3D pathfinding technology including:

- **Constraints:** In addition to shortest path, **RenderWare A.I.** can also identify trajectories that take into account complex constraints (furtiveness, dynamic dangerous zones avoidance, etc.)
- **Dynamic objects:** **RenderWare A.I.** handles 3D pathfinding with lots of dynamic objects (elevators, teleporters, doors, dynamic obstacles, etc.) A pathfinding dealing with dynamic objects is becoming more and more critical with developers controlling dynamic objects via sophisticated physics engines. When moving or destroying dynamic objects, a non-player character or a player prevents or authorizes accesses:
 - if a bridge is destroyed, non-player characters will find an alternative way to cross the river;
 - if a door is closed, they will look for a key or find another way;
 - if boxes have fallen and blocked an entrance, they will go through the window.
- **Dynamic avoidance**
- **Memory and CPU consumption optimization**
- **Automatic pathfinding data generation** (PathData)

Behaviors

RenderWare A.I. offers on-the-shelf customizable behaviors, including: go to, follow, flee, wander, follow path, hide and fight.

Team

RenderWare A.I. covers behavioral needs not only from a single character perspective but also from a team perspective. **RenderWare A.I.** includes mechanisms to share information between team members and to ensure communication among them.

Decision

- C & C++ brain support
- Lua scripting functionalities

Production tools

RenderWare A.I. provides tools that significantly accelerate production:

- A.I. assets automatic generation and edition;
- Efficient run-time parameters configuration & tuning (CPU consumption, non-player characters attributes, etc.)

Performances

Thanks to its unique time-slicing mechanism as well as its customizable memory management system, **RenderWare A.I.** offers high level performance and low memory footprint on all game consoles.

Openness

RenderWare A.I. can either be quickly integrated or easily extended, depending on the developers needs, thanks to the flexibility of its architecture.