

# AI.IMPLANT

ARTIFICIAL INTELLIGENCE MIDDLEWARE FOR HUMAN, VEHICLE BEHAVIOUR DEVELOPMENT AND SIMULATION

## ARTIFICIAL INTELLIGENCE FOR SIMULATION

### AWARD WINNING MIDDLEWARE

- AI.implant is the only artificial intelligence middleware to be awarded the Game Developer Frontline Award... twice.
- AI.implant is an open tool chain to easily create environment attribution and adapt pathfinding/path planning to meet the needs of any scenario.
- Development Environment (AI.DE). Deep Integration with STAGE. Even non-programmers can create a variety of complex intelligent behaviors.

### CUSTOMERS AND USE CASES

- AI.implant is the trusted AI solution for such companies as:  
Lockheed Martin, FATS, Krauss-Maffei Wegmann, SAIC, Institute of Creative Technologies and L-3 Communications.
- Typical applications:
  - Battle Labs
  - First Responder
  - Homeland Security
  - Urban/MOUT Training
  - Mission Rehearsal
  - Urban Planning
  - Serious Games
  - Commercial Games

AI.implant is a production-proven Artificial Intelligence software and SDK. With visual behavior, automated environment navigation mesh, perception attribution authoring and debugging tools, users can create human and vehicle agents for simulation projects that easily scale from a single intelligent entity to large populations of intelligent autonomous entities. AI.implant makes it easy to create and control all entities in any complex simulation.

Artificial intelligence for human, vehicle behavior, AI.implant is ideal for urban training, simulation & analysis projects requiring realistic and dynamic environments & complex human behaviour. Offering 3D entities capable of non-doctrinal, complex, and adaptable behavior, AI.implant is the smart way to make any existing simulation better.

By increasing realism and making it easier to create entities with complex intelligent behavior, AI.implant is advancing the state of visual simulation. Offering virtually instant intelligent populations and highly scalable individual human behaviours, AI.implant ensures the greatest fidelity for immersive simulation.

As a commercial-off-the-shelf (COTS) middleware product, AI.implant integrates seamlessly into existing pipelines and simulation engines and greatly increases the robustness of any simulation through its user friendly development and debugging tools.



We found the AI.implant SDK flexible enough to meet the demands of our developers as well as current and future customers alike.

- Udo Holländer, Training & Simulation, Krauss-Maffei Wegmann

#### Open And Extensible

AI.implant is an open toolset to easy create environment attribution and adapt pathfinding/path planning to meet the needs of any scenario.

- Open C++ Software Development Kit (SDK)
- Pathfinding events
- Various levels of API access
- Extensible, open API

#### Complete Middleware Solution

The C++ SDK enables developing cutting-edge 3D applications. AI.implant contains all of the software required for visual & automated authoring and debugging:

- Runtimes for Windows and Linux
- Development Environment (AI.DE)
- Deep software Integration with STAGE
- Direct OpenFlight, UHRB, CDB, and multiple terrain format support
- Plug-ins for Presagis Terra Vista & Creator, Autodesk 3ds Max and Maya

#### Realtime & Scalable.

AI.implant is engineered to be real-time and memory efficient for scalable intelligent populations. Multi-processor and multi-threaded.

#### Integrated Into Any Simulation Engine

Development and debugging tools out-of-the-box to integrate AI.implant into applications with a minimum amount of programmer effort.

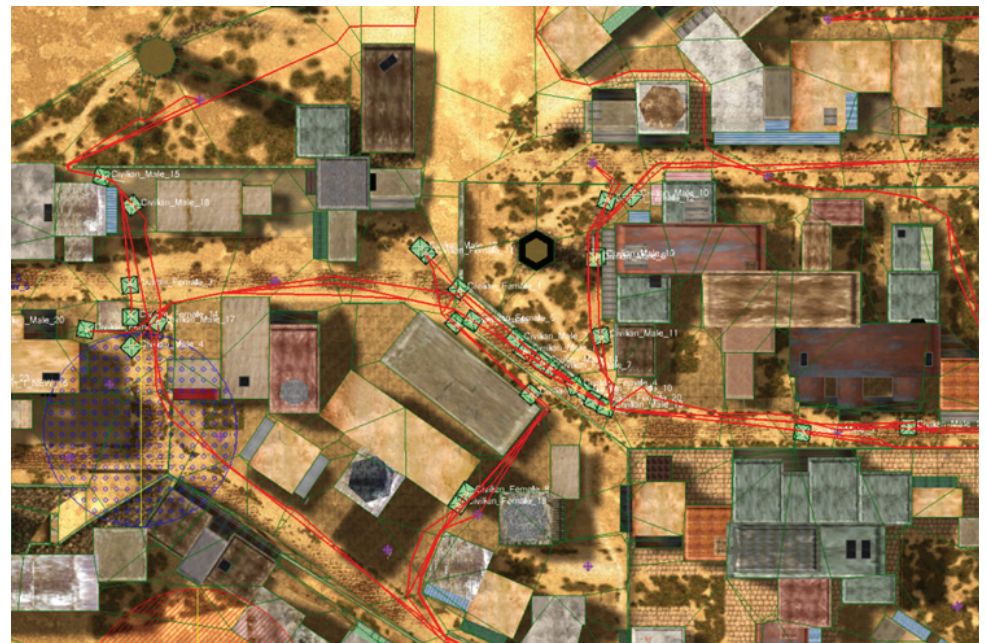
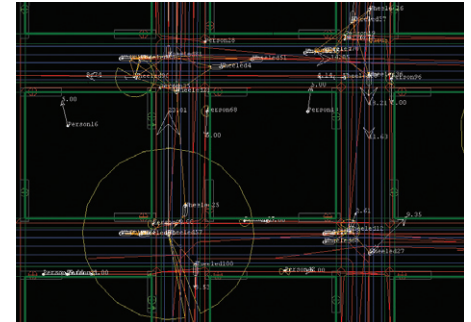
## DYNAMIC AREA BASED PATHFINDING

Dynamic area based pathfinding is a powerful physics-aware dynamics navigation that can respond to unpredictable changes in the simulation physics. An area based “map” for AI enables entities to move naturally, not robotically, within the defined area. Correlation issues and/or network generation nightmares are eliminated because AI.implant uses terrain data for pathfinding. Complex dynamic obstacle avoidance strategies prevent characters from running into each other or from getting stuck while pathfinding.

Visit [www.presagis.com](http://www.presagis.com) for more information.

## NEXT-GEN SIMULATION

AI.implant helps developers to enhance realism by creating non-scripted rule-based agents that can intelligently adapt instead of simply following pre-scripted scenarios. Using AI.implant, simulation developers can create dynamic environments as well as intelligent entities who are so aware of their surroundings that they can make informed decisions based on input from any given situation.



AI.implant capabilities integrated in Presagis CGF, STAGE.