What is Direct AI?

Direct AI is a **mature software development kit** (SDK) that contains:

- The Direct AI behavior execution engine, which includes a Lua scripting engine
- A C/C++ integration API
  - Easy C integration (less than 10 C functions, integration in a single day)
  - C++ API renders the binding of Lua functions seamless
- A structured AI langage and Lua API for behavior scripting
- An IDE (Integrated Development Environment) based on the Eclipse platform

How Direct AI can help me?

- Enrich applications and devices with AI capabilities
- Allow developers to endow characters in simulations and games, robots and smart objects with autonomous behavior
- Some use cases are :
  - Ambient life (make a city looks alive by adding autonomous agents)
  - Automate complex tasks in order to allow users to focus on training instead of focusing on controlling characters
  - Robots that exhibit adaptive, interactive and complex behaviors
  - Implement training scenarios

IDE features

- Edition of behaviors using industrial-strength Lua editors (with completion, syntax coloring, snippets, etc.)
- Full-featured Lua debugger
- Simplified tree-based XML edition of model entities
- Project explorer
- Graphical type and behavior hierarchy viewers
- Validation of a behavior library contract
- Mutliple projects

Direct AI features

- Structured approach:
  - Organize entities into categories
  - Faster behavior creation through to strong reusability
- Use 'task' entities to compose simple behaviors declaratively. No programming needed
- Behaviors are scripted in Lua and are dynamic (no need to compile)
- Based on FFH (Free-Flow Hierarchy) paradigm, Direct AI allows you to easily implement adaptive opportunistic and complex behaviors (and simple ones too!)
- A messaging component allows AI agents to communicate
- Multi-threading : leverage the power of current multi-processor architecture by distributing AI brains over distinct processors
- Debug mode checks contract violation on-the-fly
- Profile AI using built-in Lua profiler
- C API provides for integration with C#, Python, Java, etc.
- Fast, lightweight, robust and heavily tested