

# New Autodesk Middleware Empowers Developers to Achieve Innovative Game Experiences

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SAN FRANCISCO, March 25 /PRNewswire-FirstCall/ -- Game Developers Conference -- Autodesk, Inc., (Nasdaq: ADSK) has announced new versions of its two runtime technologies for the game engine -- Autodesk HumanIK 4 animation middleware and Autodesk Kynapse 6 artificial intelligence (AI) middleware. Autodesk's high-performance middleware solutions are flexible, production-proven and backed by solid support. The products have been adopted for at least 100 triple-A titles, including "FIFA 09" and "Warhammer Online: Age of Reckoning."

"Autodesk middleware products offer a solution to common runtime challenges, allowing development teams to concentrate on the creative work involved in authoring amazing new gameplay experiences," said Marc Stevens, Autodesk vice president, games. "For example, HumanIK helps to alleviate the burden of large clip libraries by enabling procedural motion adaptation, which reduces the number of clips animators need to produce and maintain. With Kynapse, programmers can avoid the development time and costs involved in writing custom runtime solutions for universal AI issues, like spatial awareness."

## Autodesk Kynapse 6: Put the Brain in Your Game

Autodesk Kynapse middleware is a leading AI solution for game development and real-time simulations. With this middleware, developers can conveniently breathe life into games with characters that have spatial awareness, dynamic 3D pathfinding capabilities and team coordination.

Kynapse was recently adopted by Mythic Entertainment, an EA studio, for "Warhammer Online: Age of Reckoning." "The huge world of 'Warhammer' meant we needed a very robust pathfinding solution," said Matt Shaw, CTO. "Our entire player movement system is built around enabling players to go wherever they are capable of reaching. Autodesk Kynapse gave us an algorithmic exploration solution that enabled our AI-driven actors to path with the same constraints and freedom as players."

Kynapse 6 delivers new features that make it easier for game engineers to integrate the software and get results.

- -- Remote Debugger: The new remote debugging tool enables users to inspect the state of the game variables, with an interactive 3D view of the debug information. Users can also record and replay sequences, while retaining access to the data in the recorded files
- -- New 3D Pathfinding Technology: The "flat" pathfinding technology introduced in this release offers simplified data generation workflows, more flexible runtime data streaming, and the ability to add new paths on-the-fly at runtime
- -- Improved MMO support: Data resources and runtime services can now be shared across multiple Kynapse worlds, improving support for Massively Multiplayer On-line games
- -- Enhanced Dynamic 3D Pathfinding: With improved CPU performance and granular control over memory consumption, characters can more easily avoid dynamic, movable obstacles
- -- Hierarchical 3D Pathfinding: Characters can now plan paths that span the entire breadth of huge maps, even when those maps cannot be loaded in their entirety. The path is first computed at a low level of detail, and then refined opportunistically when more detailed data becomes available, keeping memory usage within set limits

### For more information about Autodesk Kynapse 6, visit www.autodesk.com/kynapse.

# Autodesk HumanIK 4: Believable, Runtime Character Animation

HumanIK animation middleware frees animators from having to produce every possible animation clip by procedurally adapting existing character animation to game environments at runtime. Also, the technology's runtime retargeting enables developers to reuse banks of animation on characters of completely different scales and proportions. As a result, development teams can save time for more creative challenges.

Furthermore, HumanIK enhances animation systems by enabling characters to interact more realistically with the game environment. Characters place their feet correctly, climb walls and pick up objects, even when the game environment changes. With fewer gameplay constraints, HumanIK helps to bring games to life with more believable and immersive character animation experiences.

The latest release -- Autodesk HumanIK 4 -- delivers a User Guide and a new set of examples, integrated with the Trinigy Vision game engine. It also improves knee response to ankle rotations. For more information about HumanIK 4, visit <u>www.autodesk.com/humanik</u>.

### Platform Support and Availability

HumanIK 4 is now available. Autodesk anticipates that Kynapse 6 will be available during spring 2009. Both middleware products are optimized for PLAYSTATION 3, Xbox 360, Nintendo Wii video game and entertainment consoles, as well as PCs running Windows or Linux. Kynapse is also optimized for the PlayStation 2, Xbox, and PSP game consoles.

## About Autodesk

Autodesk, Inc., is a world leader in 2D and 3D design software for the manufacturing, building and construction, and media and entertainment markets. Since its introduction of AutoCAD software in 1982, Autodesk has developed the broadest portfolio of state-of-the-art Digital Prototyping solutions to help customers experience their ideas before they are real. Fortune 1000 companies rely on Autodesk for the tools to visualize, simulate and analyze real-world performance early in the design process to save time and money, enhance quality and foster innovation. For additional information about Autodesk, visit www.autodesk.com.

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