

PRESS RELEASE

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Walt Disney Pictures and Autodesk Sign XGen Technology License Agreement

Companies Collaborate to Bring Innovative Technology for Computer Generated Animation and Visual Effects to Digital Entertainment Creation Artists

SAN RAFAEL, Calif., August 9, 2011 — At [SIGGRAPH 2011](#), [Autodesk, Inc.](#) (NASDAQ: ADSK) and Walt Disney Pictures announced an agreement to bring an innovative animation and visual effects technology to the [Digital Entertainment Creation](#) community. Autodesk obtained a license with a five-year exclusivity period for the XGen Arbitrary Primitive Generator technology (XGen), used most recently by Walt Disney Animation Studios (WDAS) in the hit animated film “Tangled.”

XGen technology was first presented by WDAS in a research paper at SIGGRAPH in 2003 for the creation of computer-generated fur, feathers and foliage. Since that time, XGen has evolved and been refined on seven features, three shorts and one TV show. It has been used to create the fur, hair, feathers, trees, leaves and rocks in “Bolt,” the trees and bushes in “UP,” the dust bunnies, debris, trees, bushes, clover and flowers in “Toy Story 3,” and the grass and trees in “Cars 2.” In “Tangled,” WDAS used XGen to bring the lavish 3D animated world to life: from Rapunzel’s perfectly groomed golden locks to the film’s lush, vegetation-filled landscapes, including bushes, flowers, vines, grass, weeds, moss, thistle, ground mulch, fallen leaves, sticks, rocks, butterfly fur, airborne dust, leaves and trees, plus props such as roof tiles, arrow fletchings, a broom and paint brushes.

XGen is a comprehensive system for generating arbitrary primitives on a surface. The system advances the state-of-the-art in the industry in several ways with its versatility, durability and impact. XGen allows techno-artistic access to interpolation in an intuitive manner for artists, empowering them with a powerful and flexible framework for primitive generation, which is highly art directable. The genesis of XGen was a collaboration between the WDAS production and software teams to provide its artists with intuitive, creative tools for 3D animation — such as “grooming” tools for fur and hair — so that they can develop the look and feel of their characters and environments more quickly and easily. Senior Development Software Engineer at WDAS Tom Thompson was an initial creator and remains the chief architect of the software. Walt Disney Pictures’ agreement with Autodesk will enable Autodesk to make this technology available to artists to create digital entertainment.

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“Twenty years ago, visual effects artists creating computer graphics were mostly mathematicians and scientists using highly technical and complex software tools that required significant amounts of custom programming,” explained Chief Technology Officer Andy Hendrickson, Walt Disney Animation Studios. “Back then, off-the-shelf software could not create the required details of nuance and emotion. Today, we were able to create XGen as an effective artistic tool because Autodesk provides studios like ours with comprehensive tools and a flexible, extensible platform to develop on. The Autodesk customizable toolset helps visual effects artists do their best work.”

“A key challenge in the visual effects industry continues to be the need to constantly evolve creatively while somehow controlling rapidly escalating production costs,” said [Marc Petit](#), senior vice president, Autodesk Media & Entertainment. “To help customers better address this challenge, Autodesk has been working with industry leaders like Walt Disney Animation Studios to help them innovate faster and to make these new technologies more broadly accessible. Digital Entertainment Creation users are sure to benefit from developments designed by industry visionaries and proven in production.”

Walt Disney Animation Studios Director of Studio Technology Dan Candela said, “A primary focus for my team is to ensure that the production pipeline is streamlined in order to efficiently produce the best possible CG animation. With Autodesk’s Maya as a core piece of our toolset, we’ve developed over 100 plug-ins and extensions for the platform to enable our artists to create a movie of the quality of ‘Tangled’ within necessary time and budgetary limits. Sharing our technology with the VFX and CG animation community raises the creative bar for the entire industry.”

Walt Disney Animation Studios has contributed many innovations to the entertainment industry, including the [open source projects](#): SeExpr, Reposado, munki and Partio. Over the past two years, Autodesk has integrated two other WDAS technologies into its software, the Maya Camera Sequencer and Ptex. The animation studio’s Camera Sequencer was introduced in [Autodesk Maya](#) 2011 3D animation software and provides powerful multicamera editorial capabilities for previsualization and virtual moviemaking. WDAS’ Ptex texture mapping system was incorporated into Maya 2012 and [Autodesk Mudbox](#) 2012 digital sculpting and texture painting software. With the single-step interoperability between Maya and Mudbox in the [Autodesk Entertainment Creation Suites](#), Ptex enables artists to create highly detailed, textured models more quickly and efficiently.

The Software team at Walt Disney Animation Studios has continued its contributions to the animation and visual effects community by making technology available as open source software for use across the entertainment industry. The studio has a history of technological innovation and advances the use of open source software. Concurrently, Autodesk continues to work with the industry to help in the broader adoption of open source initiatives, such as Ptex, Alembic and OpenEXR, as a means of increasing production efficiency through greater standardization.

About Autodesk

Autodesk, Inc. is a leader in [3D design](#), engineering and entertainment software. Customers across the manufacturing, architecture, building, construction, and media and entertainment industries — including the last 16 Academy Award winners for Best Visual Effects — use Autodesk software to design, visualize and simulate their ideas. Since its introduction of AutoCAD software in 1982, Autodesk continues to develop the broadest portfolio of state-of-the-art software for global markets. For additional information about Autodesk, visit www.autodesk.com.

About Walt Disney Animation Studios

Located in Burbank, California, Walt Disney Animation Studios brings imagination to life through traditional and computer animated films. WDAS is filled with diverse talent from all around the globe whose passion is to create beautiful and timeless films through the art of storytelling, the magic of animation and the science of cutting-edge technology. For additional information about WDAS and The Walt Disney Company, visit <http://corporate.disney.go.com/>.

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