

Remedy Entertainment
www.remedygames.com

Autodesk® 3ds Max®
Autodesk® MotionBuilder®
Autodesk® Mudbox™

We needed a faster way to process all our animations, so we built a one-click solution using MAXScript. It's just so easy to write our own utilities in 3ds Max with MAXScript. You can more easily do things you simply cannot do in other software packages.

—Henrik Enqvist
Animation Programmer
Remedy Entertainment

Lighting the way.

Remedy Entertainment uses Autodesk® software and workflow to help guide *Alan Wake* from darkness to light.



Alan Wake. Image courtesy of Remedy Entertainment Ltd.

Summary

The poet John Milton once wrote that “long is the way, and hard, that out of darkness leads up to light.” Centuries later, that sentiment seems equally appropriate when referring to *Alan Wake*, the latest video-game offering from Finland-based Remedy Entertainment and published by Microsoft Game Studios. Building on its successful creation of both *Max Payne* and *Max Payne 2: The Fall of Max Payne*, the Remedy team upped their Autodesk ante on *Alan Wake*, using a combination of Autodesk® 3ds Max®, Autodesk® MotionBuilder®, and Autodesk® Mudbox™ software.

Billed as a “psychological action thriller,” *Alan Wake* is definitely not your typical video game. For one thing, the titular protagonist is not a mythic warrior or other killing machine, but an old-style typewriter-tapping writer of mysteries. Moreover, it is a literal struggle of light against darkness that constitutes the battle at the heart of *Alan Wake*. Indeed, light itself is a significant part of the game play, as ethereal enemy characters called “The Taken” are vulnerable to it. Players must thus work to find and take advantage of both natural and man-made light sources. A simple flashlight thus emerges as the game’s most powerful “weapon.”

“At Remedy, we’ve always been most interested in building memorable characters and stories,” says Sami Vanhatalo, lead technical artist and co-founder at Remedy. “On *Alan Wake*, we really wanted to move away from the classic ‘marine with a big gun’ scenario.

We made our lead character an everyday writer, and we tried to tap into basic human psychology about darkness and light.”

Overcoming Challenges

“The biggest challenge we faced was creating a compelling and believable story,” says Kai Auvinen, art team manager at Remedy. “Creating a fully realistic, dynamic environment was crucial to establishing the right mood, tone, and overall feel. While a typical feature film might have a single story arc running through its couple of hours, a video game like *Alan Wake* needs to establish multiple storylines and dramatic outcomes over what amounts to about 20 hours. There are conflicts and cliffhangers, but there are also calmer moments of exploration and contemplation. To make those elements work, players need a fully realistic experience.”



Alan Wake. Image courtesy of Remedy Entertainment Ltd.

Autodesk®



Alan Wake. Image courtesy of Remedy Entertainment Ltd.

Autodesk MotionBuilder

With everyday realism and detail of the utmost importance on *Alan Wake*, Remedy relied on motion capture techniques and the animation capabilities of Autodesk MotionBuilder real-time 3D character animation software.

“We have been using Autodesk 3ds Max software from day one,” says Vanhatalo, “During the creation of *Alan Wake*, however, we purchased our own motion capture equipment, and MotionBuilder became a vital part of our animation pipeline. As the project progressed, we brought on more animators, all of whom wanted MotionBuilder when working with motion capture data and doing more elaborate character animations.”

“Autodesk MotionBuilder has superior inverse kinematics reach that we need for our character animation,” says Henrik Enqvist, animation programmer at Remedy. “More than others, our game is absolutely driven by our human characters. Even ‘The Taken,’ who are more unnatural than the other characters, required a great deal of keyframe animation to give them realistic movement. Our artists prefer the tools in MotionBuilder, and its workflow is very straightforward even on our most complex jobs.”

Autodesk Mudbox

In keeping with *Alan Wake*'s more realistic human focus, the game turns away from detailed monsters or mechanical robots in favor of familiar human characters. To help fine-tune details on those characters, the Remedy team turned to Autodesk Mudbox 3D digital sculpting and texture painting software.

“Most of our characters are pretty basic humans wearing standard clothing,” says Auvinen. “Mudbox is simply a great tool for helping achieve more realistic and organic-looking characters. You wouldn't want

to model detailed human characters like ours using traditional polygon modeling tools. It's excellent to have such powerful, specialized tools for painting 3D models and textures.”

Autodesk 3ds Max

From its earliest days, Remedy has relied on Autodesk 3ds Max software as a project linchpin. On *Alan Wake*, the easy customizing capabilities of MAXScript were of particular value. “While we do most of our animation in MotionBuilder now, we were able to use MAXScript to help organize and export all our animations,” says Enqvist. “Frequently, we had to fine-tune our rigs and skeletons and compression settings. We needed a faster way to process all our animations, so we built a one-click solution using MAXScript. It is just so easy to write our own utilities in 3ds Max with MAXScript. You can more easily do things you simply cannot do in other software packages.”

Pointing to the company's long loyalty to Autodesk 3ds Max, Vanhatalo, agrees: “We are able to do so many important things using Autodesk 3ds Max,” he says. “In addition to object modeling and texturing, we used MAXScript to create utilities that helped us do almost anything we wanted to do. When it came to fleshing out environments, for example, we used satellite imagery. We created a utility in 3ds Max that would read satellite data and place it in a pipeline from

which we could pluck pieces of real-world terrain to our key game locations. We were also able to use 3ds Max as a previsualization tool for many of our more complex story elements.”

The Result

With *Alan Wake* delighting gamers everywhere, the company looks forward to being busier than ever, and to keeping its Autodesk tools around to help.

“The level of dynamic detail in today's games just continues to rise,” says Vanhatalo. “Full assimilation of characters into their environments just keeps getting more important. If you look at the forests in *Alan Wake*, you can see they are all fully dynamic. Branches swing when characters run past or the wind blows. Surfaces have increasingly complicated shaders, materials, and other elements. The only constant in the games industry is change. We have to constantly look for new and faster ways of doing things. Our Autodesk workflow helps us do that.”

Beyond the challenges, Remedy looks forward to creating more interesting characters and stories with media crossover potential. *Max Payne* was transformed into a popular film starring Mark Wahlberg. Can *Alan Wake* be far behind?



Alan Wake. Image courtesy of Remedy Entertainment Ltd.

Mudbox is simply a great tool for helping achieve more realistic and organic-looking characters.... It's excellent to have such powerful, specialized tools for painting 3D models and textures.

—Kai Auvinen
Art Team Manager
Remedy Entertainment