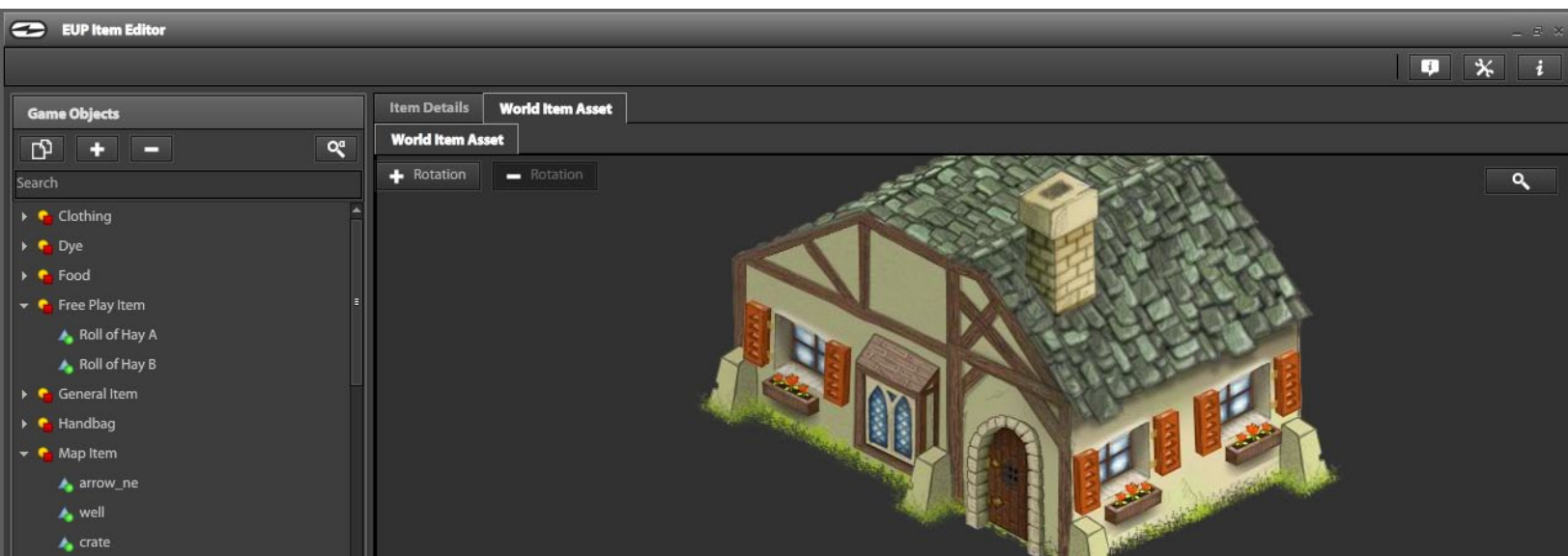Electrotank

By game studios, for game studios

Electrotank
Wilson, North Carolina
www.electrotank.com

Leading provider of game technology uses the Adobe® Flash® Platform to provide developers with robust tools for building unique and immersive MMOs, social games, and virtual worlds for the browser and mobile

Developing massive multiplayer online games (MMOs), social games, and virtual worlds is a complex undertaking that requires multiple skill sets and significant resources. Starting the development process from scratch can take months to years and cost into the millions. For successful projects, development and iteration on new content can continue long after initial launch. With the Electrotank Universe Platform (EUP) and Tool Suite, Electrotank, a leading provider of real-time multiplayer game technology, is leveraging the Adobe Flash Platform to give game developers tools to create unique and engaging cross-platform MMOs and social games faster and with less risk.

In addition to licensing game technology, Electrotank also runs a game studio that has created 400 browser-based games and more than a dozen full-featured MMOs and virtual worlds. Initially, EUP grew out of the studio's need for new technology and tools to meet increasing demand for games with rich, deeply engaging content. Now, EUP greatly streamlines the process of making MMOs by combining an extensible development framework with a dynamic, easy-to-use Tool Suite for creating and managing the game content and experience. As a development framework, EUP provides a core set of integrated game services—everything from avatars and inventory to a sophisticated questing engine—that can be easily extended by developers to create unique game features. As developers extend EUP's core services, the EUP Tool Suite automatically updates to make the related information available to content and operations teams for deployment into the game.

Challenge
Create a framework for developing rich, engaging MMOs and social games for the browser and mobile devices—with a focus on facilitating the collaboration between developers, game designers, and artists

Solution
• Created fully extensive game development framework for Flash and Unity 3 developers
• Used the Adobe Flash Platform to give developers robust, easy-to-use tools to create and deploy unique extensible multiplayer game experiences across platforms and devices

Benefits
• Drastically cut the time and risk associated with the development of unique MMOs and social games
• Enabled remote, diverse teams to collaborate effectively
• Increased revenue opportunities by providing unique, extensible game services and capabilities
• Created new business opportunities by extending gaming platform from entertainment to serious games

The Adobe Flash Platform was a key to building the EUP Tool Suite. Electrotank's engineering team used Adobe Flash Builder® and the Flex® framework to give the EUP Tool Suite a sleek look and feel that could conform to each game's custom needs. The Adobe AIR runtime enables the EUP Tool Suite to deploy on the desktop and run hassle-free across operating systems, a key requirement for game development teams who often work remotely and without uniform hardware.

First launched in 2008, EUP has been licensed to build more than a dozen full-featured MMOs and virtual words for clients such as Ubisoft, Mattel, and MTV Networks, to name a few. The platform and Tool Suite have evolved rapidly over that period to give users the ability to create and manage vast amounts of content. Via the Tool Suite, users can build world maps, create and integrate world items with rich features and media, author quests, manage vendors, moderate player behavior, preview user-generated content, and much more. Moreover, EUP's tools maximize the effectiveness of highly skilled members of game development teams—developers, game designers, artists, sound engineers, translators, and community managers—by giving them the means to collaborate in a dynamic, iterative production process.

When they approached this project, the Electrotank team never considered using any other technology than the Adobe Flash Platform. "We are completely comfortable on the Adobe Flash Platform, knowing that it will enable us to achieve great results every time and reach the widest possible audience cost effectively," says Matthew Wiesner, director of business development at Electrotank. Widely recognized as a standout integrated solution, the EUP Tool Suite was named a finalist in the 2010 Adobe MAX Awards in the Entertainment category.

As a platform, EUP can generate significant cost savings, in part thanks to the Tool Suite. For example, scripting a complicated, multi-step, nonlinear quest that involves avatar inventory, animations, items, NPCs, or world locations can take up to a week of developer time if built from scratch, excluding any time required to iterate with designers and artists. In contrast, with the EUP Tool Suite a single person can author a similar quest in a matter of hours, and can deploy the quest to the game for testing in a matter of minutes.

In addition, with drag-and-drop simplicity the Tool Suite allows users to create and integrate complex world items into the game, including items with multiple states and rotations, animated images, location-sensitive sound files, and more. The tools also greatly simplify the work associated with managing art assets by automatically storing them in a remote content repository via the Tool Suite, making it much easier to organize, identify, edit, and deploy images and icons related to world items.
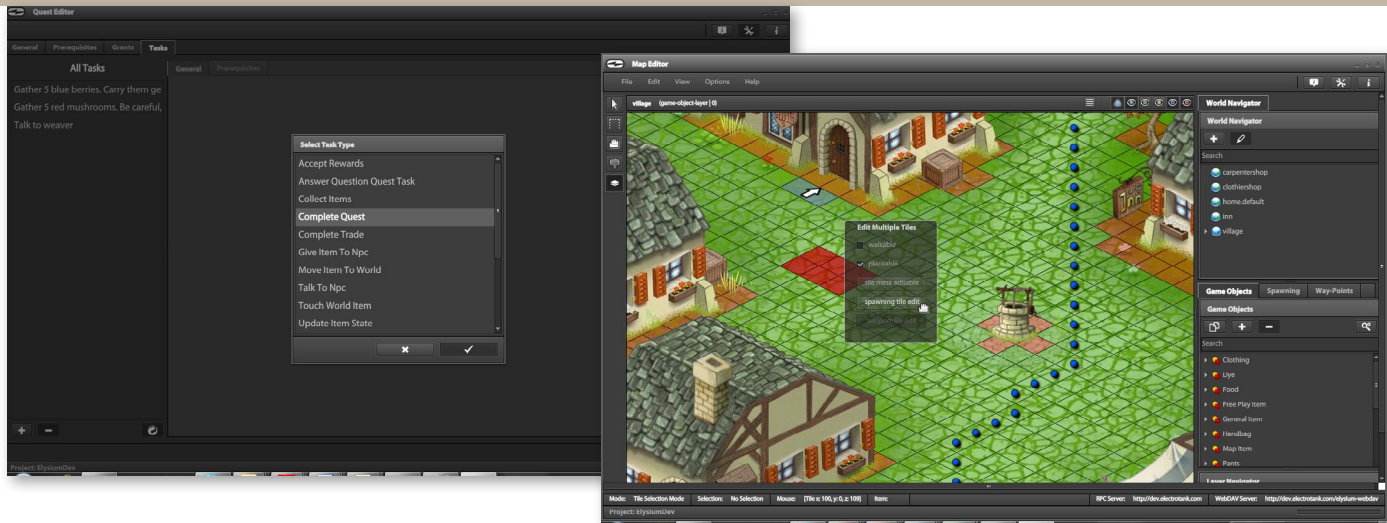
Framework for customization

Much of the Tool Suite is comprised of form-based panels, leveraging the capabilities of the Flex framework. Additionally, skinning and other Flex components contributed to the streamlined development process of the Tool Suite.

From the start, Electrotank wanted the Tool Suite to be a desktop application for use by distributed collaborative teams. "Adobe AIR provided us with everything we needed to differentiate the EUP Tool Suite as a productivity solution that fills a market gap," said Wiesner. "It gives us a definite competitive advantage."

Key factors in selecting Adobe AIR included its ability to read and write to local systems, automatically update versions and releases, and serve as a reliably distributed solution for the ever-growing, worldwide community of game designers and developers.

One of the most powerful features of the EUP Tool Suite is that it conforms automatically to reflect the custom nature of projects built using EUP. For example, if a project calls for avatars to have specific customizable characteristics—say, wings for a dragon or skates for a hockey player—game developers have only to write a few lines of code and create a list of options such as big, small, or pointy. The sections of the Tool Suite related to avatars will update automatically to reflect those choices. "Our engineers have effectively leveraged the Adobe Flash Platform to create a set of content and operations tools that largely look after themselves," says Wiesner.

As a platform, EUP has other unique characteristics that benefit games developed with Flash technology. For example, EUP comes with an optional Flash rendering engine that allows for large scrolling maps and excellent performance in the browser (50 frames per second in HD over a standard broadband connection). The platform also recently launched AvGen, its proprietary system for real-time rendering of 2D avatar animations using 3D models stored on remote servers. This approach allows for unmatched ability to deliver highly customized avatars with scores of animations without tedious coding or bulky downloads.

Extending games to new sectors and across platforms

The Electrotank Universe Platform is gaining notice from both the business and military sectors seeking to put gaming principles to use in training applications, communication frameworks, and virtual environments for product development—as well as other enterprise needs that involve heavily data-driven, server-side architecture tied to immersive experiences.

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Jobe Makar
Founder and chief virtual world and game architect,
Electrotank

Toolkit

Adobe Flash Platform. Components used include:
• Adobe AIR
• Adobe Flash Builder
• Adobe Flash Player
• Flex framework

Adobe Creative Suite Design Premium. Components used include:
• Adobe Flash Professional
• Adobe Photoshop®
• Adobe Illustrator®

Moreover, EUP as a platform relies on Electrotank's networking engine, ElectroServer, to provide real-time scalable connectivity for users on almost every major rendering platform or device. Using ElectroServer, EUP can communicate with games that reside in the browser, on the iPhone, iPad, or on Android™ devices, much in the same way that EUP communicates with the Tool Suite itself (via RPC calls).

"The EUP Tool Suite is a great example of how powerful the Adobe Flash Platform has become as a means of delivering and managing content for remote users across platforms," said Jobe Makar, founder and chief virtual world and game architect at Electrotank. "It is hard to imagine the explosion of online and mobile games in recent years without the advanced capabilities that Adobe Flash makes possible."

For more information
*www.adobe.com/products/
flashplatform*