

Autodesk®
In Television



Autodesk Television Solutions

Digital Entertainment Creation tools from Autodesk help users create better television through design



Image courtesy of Serena Digital.

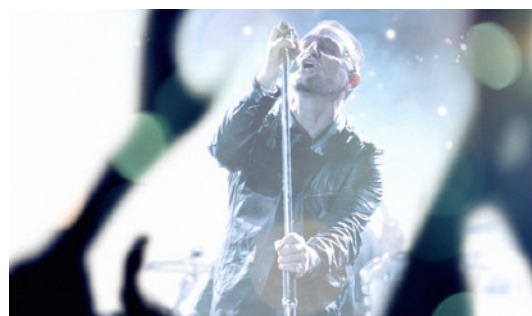


Image courtesy of Mass Market.

With hundreds of channels, IPTV, mobile devices, on-demand programming, and now stereoscopic 3D (S3D) to contend with, program makers and advertisers need fast, flexible, and highly efficient solutions to create the compelling content they need to catch and hold viewers' attention.

Autodesk offers high-performance interactive tools to help you create more, work faster, and even make last-minute changes without risk. Whether you're creating a promo package, an effects-packed hour of drama, 21 episodes of animated children's TV, or a high-impact 30 second commercial, Autodesk's integrated portfolio of editing,

graphics, visual effects, and 3D animation solutions will help you produce better-looking content on a tight deadline.

With our broad portfolio of 64-bit creative solutions optimized for Mac OS® X, Autodesk offers you a high-performance, end-to-end workflow, from production design to creative finishing, especially for the Mac® computer.

Animation and Effects: Bring Big Screen Magic to TV

Whether creating fun animation for kids like *Sid the Science Kid*, packing a drama like *Heroes* with spectacular visual effects, or creating a high-impact promo package for the news, Autodesk's 3D animation solutions help bring big-screen magic to TV. The preferred choice of talented artists throughout the entertainment industry, Autodesk® Maya®, Autodesk® 3ds Max®, and Autodesk® Softimage® software enables you to draw on one of the largest pools of experienced computer graphics (CG) artists in the world.

Make your content stand out with the latest in Digital Entertainment Creation technology. Featuring advanced capabilities from digital sculpting to virtual production, the Autodesk® Entertainment Creation Suites offer even more value for money. The Suites provide the following specialized tools in addition to either 3ds Max or Maya:

- Autodesk® MotionBuilder® software for real-time 3D environments and character animation—ideal for performance capture and animation-intensive productions
- Autodesk® Mudbox™ interactive digital sculpting and paint software for creating high-quality 3D models fast

Creative Finishing: Put It All Together

Combine CG with live action footage, add visual effects and graphics, and finish projects to the highest possible standard with Autodesk® Smoke® and Autodesk® Flame® creative finishing software.

Featuring high-quality blue/greenscreen keyers, precision motion tracking algorithms, a true 3D compositing environment, sophisticated color correction tools, and interactive paint capabilities designed for use on both traditional and stereoscopic 3D productions, Smoke and Flame allow you to create great content faster.

Autodesk Smoke software is a highly interactive solution for creative editorial finishing. It offers comprehensive editorial, conform, and finishing capabilities as well as fully integrated paint, graphics, text, color correction, and visual effects tools. Easily integrated into with Apple®



Image courtesy of Ministry of Illusion.

Final Cut Pro® or Avid® workflows, Smoke helps you increase production quality and value, delivering better TV content in less time. Smoke is now also available on the Mac OS® X operating system.

Autodesk Flame software for visual effects design gives artists the power and flexibility to tackle complex shots against tight deadlines. Flame is designed to help artists experiment freely, test creative concepts quickly, and make instant changes. With one of the most comprehensive, high-performance creative toolsets on the market today, Flame can give you the competitive advantage you need to make your content truly stand out.

And with Autodesk® Flare™ software, a fully compatible creative companion to Flame, facilities have greater flexibility to add capacity to their pipelines as they need it.

Color Grading: Immerse the Audience

With DTV and HDTV consumption growing, audiences expect high-quality content. Color grading helps you enhance the look and feel of your TV projects—from commercials to sitcoms—creating mood and engaging the audience at a deeper emotional level. Autodesk® Lustre® software helps you shape color and lighting to design stylized looks and to establish a richer visual

narrative and tone. For both mono and stereoscopic 3D production, Lustre provides a rich, intuitive toolset that integrates tightly into a Smoke and Flame workgroup.

Workflow Media Management: Make Your Pipeline Flow

The path from concept to TV screen is complex with extensive collaboration required between the different production and post-production teams. A pipeline based on Autodesk tools—taking full advantage of shared infrastructures, rich data assets, and cross-product interoperability through open standards (for example, FBX, AAF, XML), — enables creative professionals to fully collaborate, explore, share, and realize their creative vision.

Flame, Smoke, and Flare offer 100 percent data compatibility, enabling visual effects artists and editors to share setups for multilayered effects. And with Lustre, the colorist can work concurrently on the same media, grading shots for the editor or visual effects artist. At the same time, 3D geometry, animation, and textures can be easily exchanged between CG, editorial, and finishing via Autodesk® FBX® technology—one of the most widely used and supported platform-independent 3D data interchange solutions in the industry today.

Flame, Smoke, and Lustre also integrate well into third-party workflows through extensive support for industry-standard interchange formats such as MXF, AAF, and XML, and popular digital media formats.



Image courtesy of Four Nines.

Solutions in Action

Commercials

With only 30 seconds to grab viewers' attention and convey the client's message, agencies creating television commercials need to provide maximum visual impact. The goal is to make something so compelling that instead of hitting the fast-forward button, viewers actively seek out the spot.

The New York studios of renowned visual effects house Smoke & Mirrors (SMNY) did just that when they took on the challenge of bringing to life the cover art from The Beatles "Abbey Road" album for spots promoting a new MTV game, *The Beatles™: Rock Band™* video game. To pull off this incredible illusion, Smoke & Mirrors turned to Autodesk solutions Flame, Smoke, Flare, Softimage, and Maya.

Intensive visual effects were needed to match archival footage of the Beatles, taken at different times in their career, to the album cover. Visual Effects Supervisor Nic Seresin explains:

"This meant using heavy camera tracking, distortion, rotoscoping, and virtually every Flame tool we had to do the head reps and take moustaches, beards, and extra hair and 'graft' them onto the Beatles' heads, while considering underlying subtle facial movements. The illusion had to be totally credible because viewers would know if it rang true or not."

The team also used Flare directly on set, running it on a laptop, to evaluate each take to determine if the effects would work.

"Flare impressed everyone who witnessed how it brought Flame capabilities to the set," says Simon Hester, head engineer at SMNY. "Back in the studio, it works seamlessly with our Flames and the other Autodesk systems in our powerful, efficient pipeline. There was no way we could have achieved what we needed to on this project without Flare."

Primetime Episodic

From *Heroes* to *Red Dwarf*, audiences increasingly expect film-quality visual effects on TV, but production schedules and budgets remain limited. Many post facilities are turning to award-winning toolsets that have helped bring new efficiencies to creating the most successful films around the world.

Australia-based visual effects and post-production training company fxphd is one example. When Doug Naylor, creator of the UK comedy series *Red Dwarf*, felt it was time for a comeback for the cult 80s show, he turned to fxphd for help. The result was a three-part 90-minute mini-series, packed with 262 effects shots. Timeframe for delivery? Just 27 days.

Working with footage shot using the RED ONE® camera, the artists at fxphd and at Fin Design posted, finished, and delivered *Red Dwarf* according to a fully digital Flame



Image courtesy of Gravity Rhino Group.

and Maya workflow. Mike Seymour, one of fxphd's founders, explains how Flame helped the teams finish on time: "The system is so fast, fluid, and graphical that experienced operators can go through complex compositing shots at an astonishing rate. Flame is unbeatable."

Autodesk technology also enabled the team to replace much of what had been previously constructed as physical sets with CG models. Using Maya for all the virtual sets, big background environments, and character animation, 3D data from Maya was then passed into Flame. Seymour explains:

"It was a seamless pipeline that worked incredibly well. We couldn't have considered using anything else but Maya for this project."

All of this added up not only to a more impressive look for *Red Dwarf*, but also to better comedy. As Seymour concludes:

"Because the shots were so believable, we could make them a lot funnier without getting cheesy. All of this made the project the most creative and professionally rewarding I've ever worked on."



Evian 'Skating Babies,' BETC Euro RSCG, Image courtesy of MPC.



Image courtesy of UVPFACTORY.



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Image courtesy of Speak Easy FX.

Children's Programming

As parents know, children can be demanding in their tastes, especially when it comes to animation. It takes great stories, with fun, engaging characters and eye-popping imagery, to keep the attention of today's easily distracted kids. And, as always, all of this has to be achieved on a tight budget.

Jim Henson's Creature Shop, the company behind such well-loved favorites as *The Muppets* and *Fraggle Rock*, knows all about that. Over the last few years, the company has been perfecting the Henson Digital Puppetry Studio, a proprietary system that makes ample use of Autodesk Maya and mental ray® rendering software. Simply put, the digital puppetry process combines 3D virtual environments and effects with advanced motion capture techniques to help capture the performer's body movements as well as voice-synchronized facial puppetry in a single, real-time scene.

Designed to encourage curiosity and promote an early interest in science, *Sid the Science Kid* is the first complete series to be created using the system. The series consists of 40 episodes of digitally puppeteered performances captured on a virtual stage and in real time:

"We're using Maya in a truly real-time production setup, following a live action paradigm," says Steffen Wild, visual effects supervisor. "That's definitely new."



Image courtesy of Cutting Edge.



BBC Winter Olympics, Image Courtesy of Studio AKA.

Broadcast Graphics

If the individual long- and short-form programs are the real substance in a station's output, broadcast graphics, such as branding, promos, and bumpers, are the glue that turns them into a cohesive, recognizable offering. To keep them fresh, relevant, and attractive, they are continuously updated, with multiple versions of each campaign—sometimes in a number of languages—co-existing at any time.

At Zee Networks' operation in Mumbai, India, 12 Smoke artists work in shifts around the clock to create a cavalcade of promos, program openings, and other broadcast design elements for the more than 40 channels that Zee Networks delivers to more than 500 million viewers in over 167 countries. Despite this heavy workload, each promo is visually refreshing and a distinctive artistic gem that entertains viewers while defining each channel's unique identity and programs.

"We have found innovative ways to use Smoke as a fast, capable broadcast graphics machine; and when people see what we're doing, they're really dazzled by the software's unsung graphics capabilities," says Vipul Bhalala, creative supervisor and Smoke artist for Zee Networks. "Smoke is feature-rich, user-friendly, interactive, and fast—which helps our artists and designers realize their ideas more effectively and deliver the highest possible quality and productivity."



Image courtesy of Zee Networks.

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— Vipul Bhalala
Creative Supervisor/Smoke Artist
Zee Networks

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