



software

tOG Edit



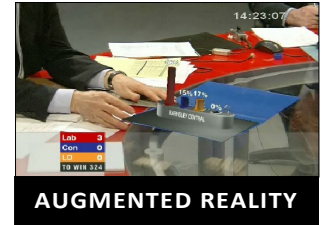
TEXT & TICKERS



SPORTS INSERTION



VIRTUAL STUDIOS



AUGMENTED REALITY



tOG Edit - the graphic authoring tool for all RT Software tOG products

tOG Edit is RT Software's main graphic authoring tool. It allows designers and operators to create new graphic content, import content from 3rd party tools, add real time data and animations or edit existing graphics. It contains all the tools you would expect from a high end graphics editor including timelines, scene hierarchy, editors, state control and fully professional GUI based interaction.

You are free to do initial creation work in 3dStudioMax, Maya or any design tool supporting .fbx file format, and for complex graphics like virtual sets this is the industry preference. Customers say our support of .fbx is probably the best in the industry as we bring in the geometries, textures, lighting, even animations and scene hierarchy.

It is the same workflow and interface across all products whether it is for virtual studio, bespoke tOG Sports specials, templated screen overlays or regular text, table and crawls.

KEY FEATURES

- Full support for FBX and OBJ asset data exchange
- Intuitive, easy to use interface with full mouse based drag and drop and multi camera views.
- Scenegraph hierarchy editing.
- Timeline manipulation.
- Inbuilt asset management and publishing integration for easy deployment.
- 5 different animation types.
- Data inputs from databases, interfaces (custom or auto generated), or network.
- Object value links.
- Based on powerful object orientated scripting language incorporating methods and functions.
- Leading edge OpenGL2.0 compliant Real Time rendering
- Fully integrated per pixel Lighting for Infinite, Local and Spot Lights.
- Fully integrated nVidia CG2.0 Shader effects compliant with Mental Mill.
- Multi Layer compositing.
- Full support for SD/HD Video Out up to 1080i and 1080p with fill and key.
- Mpeg and Audio input streaming off disk or across the web.
- Comprehensive font and text tools.
- Drag and drop Tickers and Crawls.
- Full support for Clocks down to 100ms accuracy.
- Powerful event management.
- Easy to use table tools.
- Easy to use charting tools.
- Trajectories.
- Particles.
- Collision detection.
- Custom plug-ins.
- Inbuilt fully editable geometric primitives.



EXTENDED GRAPHICS CAPABILITIES

A tOG-3D Graphic is a container for a set of data objects that constitute a scene. Each graphic is itself an object that contains predefined methods for construction, initialisation and animation. It is built upon a Ruby script and as such, incorporates all the power and flexibility of the Ruby programming language.

Easy to Use Graphics Tools

tOG Edit provides easy to use tools to manipulate graphics scripts, hiding the script itself from the user unless

the user specifically wishes to add their own code.

Customisable Object Manipulation Methods

With tOG Edit, users are not constrained to simple On/Off procedures with graphics. tOG Edit provides the tools to enable users to add their own methods to manipulate graphics objects on screen.

Powerful Library Objects

Probably the most powerful feature of tOG Edit graphics capability is the

ability to create Library objects. These allow you to encapsulate graphics within a single unit and then reuse these in other graphics.

POWERFUL ANIMATIONS

One of the most powerful features of tOG Edit are Animators allowing all values that appear within the editors to be animated.

Choice of animators

A user may choose bi-cubic spline, ramp, cyclic or step animators. These may be configured to repeat or be dynamic for both start or end values.

Timeline View

All animations appear on our timeline giving the user complete control over animation sequencing and timing.

Animation Creation & Control

To create an animation drag an object from the scenegraph onto the timeline. The user can play, stop, start pause or even reverse an animation using the player controls.

Animation Sequences

The timeline allows you to copy, cut, delete, move and group animators to create animation sequences. You can move between a timeline view and path view at the click of a button to allow you to edit all aspects of the animation.

Trajectories

Create 3d trajectories to drive any

value around
rate, speed
automatic





INPUTS, LINKS & TRAJECTORIES

tOG Edit makes it easy to have graphics modified in real time by data inputs, link objects together to modify whole series objects (such as table entries) and to add 3d trajectories.



tOG Edit has comprehensive interfaces to allow creation and manipulation of data inputs, including database queries, interface values, remote protocol values or even other, modified, data values. This includes a database SQL builder, a database editor and an interface creation tool.

Linking Object Values

Link animation and/or data inputs on object values a single data input or animation to update a whole series of values. A user can provide simple

expressions to manipulate the value before it is used by each value. This makes things like charts simpler to manage.

3d Trajectories

As well as regular '2d' animations, tOG Edit has built in 3d trajectories. These allow the user to 'fly' objects around a 3d curve. Trajectories can drive any value but are mainly used for objects and cameras. The user can control both the rate and speed of trajectories using paths and choose whether the direction is auto

TICKERS, TABLES, CHARTS & EVENTS

tOG Edit enables the quick and easy addition of tickers, tables, charts and events to a real-time 3d graphic template, and for events in the template to be triggered by real-time external events.



Easy Tickers and crawls

Drag and drop horizontal, vertical and teletype tickers from the custom browser straight into a scene. Change attributes such as speed, direction and spacing. Tickers can contain text or geometries and be driven in the same way as all other objects in tOG through data inputs, from interfaces, databases or remotely.

Rapid Table creation

Drastically cut down design time through the use of the Duplicate Node, prototype the first row/column of a table and then 'duplicate' it for all

other rows and columns. Tables spaced in any direction including depth to give a stunning effect.

Pro-Forma Charting Tools

Create linegraphs, histograms and piecharts. The style and shape of these can be edited using the extrusion tools and values can be added using inputs.

Events Editor

Responding to external events is an important part of real time rendering. The tOG 3d events editor provides timer, time code, GPI, keyboard, mouse and even Wii event handling. You can hook these up to methods or



POWERFUL TEXT EDITING

Text rendering is central to any broadcast graphics system. tOG Edit fully supports TrueType fonts for both ASCII and Unicode, with tools for creating stunning on-screen text.

Options for Importing TTF

Import TTF into tOG either as geometry or bitmaps. Geometric fonts give you the advantage that they do not pixilate when they are scaled or zoomed.

Standard Text Control

All the controls for horizontal and

vertical alignment, character/word/line spacing and autowrap.

Text Styles

Underline, bold, drop shadow and auto plinth, plus regular shading lighting and texturing.

Text Overrun Prevention

Never overrun by confining text to a particular screen area using a max x or y size.

Extruding Fonts

Extrude fonts using the extrude node to provide brilliant 3d text. This can even be done dynamically using animations and warps.

Multi-Language

tOG Edit incorporates multi language support and handles right to left, and vertical text for languages such as Cyrillic, Chinese/Japanese and Arabic.

Text Animation

Standard animations or character by character: combine transforms, rotates, scales and alpha animators for each character individually or all together with the option to add delay to provide stunning text animations.

CG SUPPORT FROM THE GROUND UP

tOG Edit tightly integrates the complete nVidia CG2.0 shader framework within the Edit interface. This not only allows creation of top end graphics effects, but puts the controls in the Edit interface where you would logically expect to find them.

Per Pixel Lighting

Included as standard, per pixel lighting is part of general scene lighting. No need for special plug-ins or shaders, making it easy to achieve perfectly lit scenes.

Build Custom Shaders

With the tOG Edit Effects Node author custom shaders using proprietary tools such as Mental Mill. Drop them into a project and they automatically appear in the tOG Edit. And as tOG incorporated the *whole* framework, the user gets full control over all variables through auto generated interfaces.

Animate, Input and Link

tOG Effect nodes behave like all other tOG Nodes, so users can animate them, drive them through inputs or link them to other fields and controls - seamlessly. There are also nodes available for effects such as shadows, mirrors and cloth that simplify the use of shaders to create great looking graphics.

Independent Layers

Composite a scene into order independent layers that can be composited together using CG programmes in a similar fashion to tools like After Effects. Combinations such as color dodge, burn, tinting and blurring are available.



HARDWARE SPECIFICATION

tOG-3D Edit is a software solution operating on industry standard IT hardware and operating systems, with leading video graphics cards.

Workstations

RT Software only qualifies hardware that is proven to meet the exacting demands of live broadcast for reliability, durability and performance.

Desktop/side and rack mount systems are offered from:

Hewlett Packard.

Dell.

Super Micro.

Laptops are offered from:

Hewlett Packard.

Dell.



Graphics Sub-System

tOG solutions harness the power of Quadro GPUs made by nVidia, the world leader in visual computing technology.

Video Sub-System

To ensure the quality of tOG rendered graphics are maintained all the way to video output, tOG solutions use the highest quality video input and output cards from DVS and nVidia.

More Information

- See <http://www.rtsw.co.uk/hardware> for a complete hardware specification
- See <http://www.rtsw.co.uk/products> for more information on our other tech-

About RT Software



Provides real-time 3D graphics solutions

for all on air requirements including VR studios, sports, news, elections, entertainment and academia.



Founded in 2004 and privately funded, its award winning founders had spent many years working for the Computer Graphics department at the BBC.



Based in London in the United Kingdom.

The company operates globally through a network of trained value added resellers.

Contact Us



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Through one of our local resellers

Our resellers are tOG-3D trained to provide you with local support. Please see the partners page on our web site.