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DiSTI News

October 2004



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October 2004

## Corporate Highlights

### GL Studio Sales Explode 245%!!

DiSTI sales of GL Studio licenses exploded in the 3<sup>rd</sup> quarter this year with a 245% increase over the 3<sup>rd</sup> quarter last year. For FY 2004 GL Studio sales are up over 150%. DiSTI added eight new customers of GL Studio in the month of September alone. With the release of GL Studio 3.0 in April 2004, GL Studio is now the de facto standard for virtual prototyping tools in DoD. GL Studio is now expanding its market into the courseware arena. During the 3<sup>rd</sup> quarter, several courseware development efforts requiring Level 3 or Level 4 Interactive Multimedia selected GL Studio.

"With GL Studio 3.0, development times have been cut in half over our previous version" said Joe Swinski, DiSTI president. "With our high-quality 3D graphics now easily deployed in courseware, web applications and PowerPoint – our customers are adopting our tool as a standard simulation technology", Swinski added. DiSTI

also received over \$400,000 in new professional services work for the development of Reusable Simulation Objects™ (RSO) to be used in Instructor Operator Stations, PC Simulations and Courseware. Our current work includes RSO's that will be deployed in training devices for the AH-64, F-15, F-18, F-35, UH-60, MH-60, and Boeing 777. These RSO's will be available from our RSO store at <http://shopping.simulation.com> in the near future.

### DiSTI at I/ITSEC Booth #1604 (December 6 - 9)

DiSTI will be showcasing GL Studio version 3.1 at IITSEC in the Orange County Convention Center, Orlando, FL. ([www.iitsec.org](http://www.iitsec.org)) Come see us in Booth #1604 for a detailed demonstration of the newest features in GL Studio. DiSTI can show you how you can use the same engineering file to create simulation content for prototyping, courseware, desktop trainers, IOS and many other applications.

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# GL Studio™ - Highlights

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## GL Studio 3.1 and Productivity Pak's to be released in Dec 2004

GL Studio version 3.1, a maintenance release, will be available in December 2004. Our engineers have been working very hard to bring you the newest release of GL Studio. Version 3.1 contains a number of features, GUI redesigns and capabilities that are a direct result of customer requests. The productivity packs, which significantly reduce development time of analog and digital displays, will also be released with V3.1. These productivity packs will be given free to all existing support customers. This release is available from the GL Studio Customer Support Site:

[www.simulation.com/products/glstudio/support/support.html](http://www.simulation.com/products/glstudio/support/support.html)

## GL Studio 3.1 BETA Testing

If you are a current GL Studio customer and would like to participate in DiSTI's BETA tester program for GL Studio version 3.1, please contact us via email at: [glstudio@simulation.com](mailto:glstudio@simulation.com).

## RSO Store Now Officially Open for Business

DiSTI has recently announced the opening of its Reusable Simulation Object store for business. We now offer many RSO's for sale. We have over a hundred prepackaged instruments, such as Altimeters, ADI, HSI and other engine instrumentation starting as low as \$100.

Each RSO includes:

- Unlimited Distribution of DLL, independent of GL Studio
- GL Studio Design File to customize the RSO in the GL Studio editor
- Any associated textures and behavior for further customization
- Externally available class properties for easy use
- Documentation for how to use the existing RSO

To visit the online store, please go to:

<http://shopping.simulation.com>

## GL Studio Productivity Packs

With the Release of GL Studio 3.1, DiSTI is introducing Productivity Packs for the GL Studio editor. Since V3.0, GL Studio has been designed to be highly extensible through Plug-in Objects. The GL Studio editor can now be easily extended with new custom object types tailored to enhance productivity for common tasks within the editor.

Two sets of plug-ins will be available with GL Studio 3.1 and will be free for customers that are current with their maintenance.

### GlsAnalogToolkit

- [GlsKnob](#) - Free rotating, detents, stop/start points.
- [GlsButton](#) - Momentary or toggle buttons.
- [GlsSwitch](#) - Multi-position Switches
- [GlsThumbwheel](#) - Creates thumbwheels.
- [GlsOdometer](#) - For altimeters, etc. Useful for both electronic and analog displays.

### GlsDigitalToolkit

- [GlsAngularScale](#) - Creates compass roses for electronic displays.
- [GlsEllipse](#) - Creates circles, ellipses and dynamic arcs for electronic displays.
- [GlsOdometer](#) - For altimeters, etc. Useful for both electronic and analog displays.
- [GlsMultiView](#) - Allows you to show multiple views of the same scene.

More Plug-ins coming soon!

## New GL Studio Menu Class

DiSTI is now offering the GL Studio menu class. This library allows for easy creation of soft menus found in many electronic displays, such as in MFDs or communications equipment. Menu configurations are stored in simple text files. Menus can be modified without recompilation of your application. The GL Studio Menu Class is delivered as a set of libraries, examples and documentation. Contact [glstudio@simulation.com](mailto:glstudio@simulation.com) for more details.

## What's New in Version 3.1

GL Studio 3.1 hosts a number of new features allowing you to work more productively than ever before. Many of the new features in GL Studio 3.1 are a direct result of customer feedback into the product. Let us know how we can make the next version of GL Studio work better for you!

The **GlsTextGrid** now has a Halo effect and a Shadow effect. It can also efficiently handle missing fonts, allowing you to edit a design file even if you don't have all referenced fonts on your system. The font engine has also been enhanced to support all font types and character sets supported by freetype.

The **Knob** and **Switch** Plug-Ins now have Limit Events which emit an event when the device has reached its limit. There are also release events, which emit events when the device loses focus or when the mouse is released.

New **'Find'** option allows you to find objects in the hierarchy based on their name. 'Edit' then 'Find' from the control window view or 'CTRL + F'.

The **Document Information** window has been enhanced to allow you to get statistics (polygon and vertex count, object count) on the currently selected objects in the editor, or the entire design.

**Easier management of texture maps**—it is now possible to on the Resources tab to select all textures in a design file and manage their runtime properties, including whether or not to generate them inline and what type of compression to use.

**Improved texturing of spheres and cylinders**—lining up texture maps on spheres and cylinders is easier and more precise.

**New Keyboard Release event**—you can now create event handlers for the keyboard release, not just keyboard presses, allowing you to create applications controlled by interactive keyboard input.

**Improved 3D Studio MAX Support**—The 3D Studio MAX importer now imports Cameras (as GlsEyepoint objects), imports the backface culling flag and imports the transformation matrix for each 3DSMAX objects.

**Improved OpenFLT Support**—The OpenFlt importer has been improved to better import typical OpenFLT models and to make imported geometry have similar defaults to geometry created natively in GL Studio.

**Fedora Core 2** is now an officially supported platform. Many users have been asking if GL Studio will run on Fedora. We are pleased to announce that we have been using GL Studio in house on Fedora Core 2 on a daily basis in addition to older Red Hat platforms, which are still supported. Customers have also reported success with Concurrent (Red Hawk), Mandrake and other Linux distributions.

## New Customer Support Site

We have created a new support site for our current customers.

[www.simulation.com/products/glstudio/support/support.html](http://www.simulation.com/products/glstudio/support/support.html)

This site features:

- GL Studio Tech Support Contact Information
- GL Studio FAQs
- Downloadable GL Studio example design files

Sign up for your account today and take advantage of the development information as part of your maintenance and support.

# GL Studio™ - Tech Tips

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In every news letter, DiSTI will be offering Tech Tips. These tips are based on the most frequently asked questions from our customers. As always, if you should have any questions, please do not hesitate to contact us at [glstudio@simulation.com](mailto:glstudio@simulation.com). This issue's topics are:

- Passing multiple arguments into a single property
- Deploying RSOs in PowerPoint presentations or on a web page
- Dynamically Creating new objects at runtime

## Passing multiple arguments into a single property:

The easiest way to pass multiple values into a single property is to make the property of type `GlsMultiVal<>`. This is a template where you specify the types of the arguments. The individual arguments are then accessed using `_val1` up to `_val10`. If a string argument is needed, use a `GlsPropString`, and make sure it is the last argument. This is a sample usage of `GlsMultiVal<>`:

```
GlsMultiVal< bool, int, float, GlsPropString > temp;
temp._val1 = true;
temp._val2 = 5;
temp._val3 = 3.4f;
temp._val4 = "My Message";
```

## Deploying RSOs in PowerPoint presentations or on a web page:

Using the latest GL Studio ActiveX Control, you have the ability to create ActiveX .cab files that can be deployed in any environment that can support ActiveX objects. Go to the Customer Support Website ([www.simulation.com/products/glstudio/support/support.html](http://www.simulation.com/products/glstudio/support/support.html)), download and unzip the GL Studio ActiveX component from the 'Examples' tab.

- Build your GL Studio design as a Live Component (.DLL)
- Use the Live Component with the 'make\_cab\_example.bat' file from the ActiveX component download to create a .cab file.
- Drag the .cab file over the 'disti\_sign\_cab.bat' file to sign your .cab (or use your own .cab sign)

At this point you have an ActiveX .cab file that can be deployed in a web page, an MFC application, or most Microsoft Office products, including PowerPoint. For specific directions on inserting your .cab, see the 'GL Studio ActiveX Control Help.doc' file that comes with the download from the support site.

## Dynamically creating new objects at runtime:

Generally the easiest way to dynamically create objects is to create a single instance of the object in the editor to be used as a template (possibly with visibility turned off), then write a method to create copies of the template object as needed.

```
for (int i = 1; i < MAX_LINES; ++i)
{
    GLPolygon* outline = (GLPolygon*) initialLineOutline->CloneObject(true);

    // If you don't insert the new object into a group, you might not be able to see
    // the object because it will be at the bottom of the draw order.
    GlsTextGrid* lineLabel = (GlsTextGrid*) initialLineLabel->CloneObject (true);

    // Insert the copy into a Group so that it will be drawn.
    LineGroup->InsertObject(outline);
    LineGroup->InsertObject(lineLabel);

    // Store a pointer to the new object in a separate list if desired.
    _lineOutlines.push_back(outline);
    _lineText.push_back(lineLabel);
}
```

## DiSTI Training and Events in 2004

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Event	Description	Date	Location
<b>DIS Simulation Development</b>	Practical experience in the design and implementation of real-time distributed simulation applications utilizing the DIS protocol.	October 19-22	Orlando, FL
<b>Practical Guide to HLA</b>	Learn the fundamentals of High Level Architecture from the experts. Find out how HLA works, who is using it, what you need to do, and how HLA impacts your organization. Discuss DIS and HLA migration strategies.	November 15-18	Orlando, FL
<b>Military Simulation: Techniques &amp; Technology</b>	Essential Concepts for Simulation Architectures, Models, Applications, and Interoperability	December 1-3	Orlando, FL
<b>Fundamentals of Distributed Simulation</b>	This <b>ALL NEW</b> 3-day course combines in-depth presentations on the HLA and DIS standards, interface technologies, and a variety of concept models used in distributing simulations across a network.	December 8-10	Orlando, FL
<b>I/ITSEC 2004</b>	DiSTI will be at the 2004 I/ITSEC conference showcasing GL Studio. Come see us in booth 1604. <a href="http://www.iitsec.org">www.iitsec.org</a>	December 6-9	Orlando, FL

Please visit our website at [www.simulation.com](http://www.simulation.com) for more information about our classes.

# GL Studio™ - Training courses in 2004

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DiSTI has a new listing of course dates for GL Studio training. Remember, every development license of GL Studio gets a free seat in the GL Studio class at our Corporate Office in Orlando Florida. We are also available for onsite GL Studio training courses.

Date	Location
October 25-28	Orlando, FL
December 13-16	Orlando, FL

## Brief Overview of the Course Outline

For more details, please visit our website at [www.simulation.com](http://www.simulation.com).

1. Overview of GL Studio
2. Editor Familiarity
3. Object Development
4. Code Development
5. Built-In Objects
6. Plug-Ins
7. Texture Creation
8. Setting up a New Project

## Tutorial Exercises

- Create a Simple Panel Device (Switch Plug-In, Knob Plug-In)
- Create an ADI (Creating embedded Class Properties, create 3D objects with Lighting and Materials)

- Create an Altimeter (Using Odometer Operator Class, Creating More Complex Behavior)
- Include a pre-built Live Component Multi Function Display (Interacting with Live Component Properties)
- Create the MFD from scratch (Build Nested Components, Learn Depth Buffer Masking, Create your own Component Base, Utilize Clipping Regions)

Onsite classes are also available.

For information or to schedule a class, please contact us at [glstudio@simulation.com](mailto:glstudio@simulation.com) or call us at 407-206-3390.