

GLView 3.0 the ultimate 3D Viewer and Internet VRML Browser



"Experience your world in a whole new way"

GLView is a 3D Object Viewer and WWW VRML Browser
for Windows NT 3.51 / 4.0 and Windows 95.
There is a OpenGL and a Direct 3D based version.

You use this software product at your own risk.

Menues:

[File menu](#)

[WWW menu](#)

[View menu](#)

[Camera menu](#)

[Rendering menu](#)

[Material menu](#)

[Tools menu](#)

[Options menu](#)

[Help menu](#)

[Right mouse button menu](#)

Short instruction for the GLView basic functions:

[Basic functions](#)

[Better performance](#)

Additional informations:

[License Agreement](#)

[Technical Support](#)

Contact Information

United States of America

EMD Enterprises
73 East Forrest Avenue
Suite 20
Shrewsbury, PA 17361

Support: (717) 235-4423
FAX: (717) 227-9746

eMail: support@emdent.com

WWW-SITE: <http://www.emdent.com>

Compuserve- Forum
GOWORD: GLVIEW

Europe



VISUAL ILLUSIONS GMM systems
MKC SOFTWARE
Hasselbusch 71
24558 Henstedt- Ulzburg
Germany

eMail: 101326.2466@compuserve.com

Fax: 04193-969420

Compuserve- Forum :GOWORD: GLVIEW
Internet: <http://www.glview.com>

GLView is available for Bundling- Agreements (OEM- Version) too.

Copyright © 1994-1996 Holger Grahn, All Rights Reserved.
GLView and the six- arrows- logo are trademarks of Holger Grahn;
MKC SOFTWARE and VISUAL ILLUSIONS and the MKC Logo and the VISUAL ILLUSIONS Logo are trademarks of VISUAL ILLUSIONS GMM systems / MKC SOFTWARE.

EMD Enterprises is a trade mark of EMD Enterprises.
All other trade marks are trade marks or registered trade marks of their respective owners.
Support

File menu commands

The File menu offers the following commands:

Read	Read a 3D object or image from a file.
Save As	Save the current 3D scene or object.
Render to file	Render current scene to DIB/BMP file in arbitrary resolution.
New	Creates a new 3d object using the <u>New Object Dialog</u>
New Font Logo	Creates a new 3d object from a text string using the <u>New Font Logo Dialog</u>
Exit	Exits GLView.

Next:
View Menu

New object dialog

With this dialog predefined 3D objects can be created.

The New object dialog offers the following options:

Type	<p>The type of object to be created.</p> <p>Predefined objects :</p> <p><u>Meshes:</u> ronny, icosahedron, wheel,cylinder, cylindery,spherey,cone VRML conform aligned at the Y-axis</p> <p><u>Surface objects:</u> sphere surface, cylinder surfaces ,plane recursive subdivision objects:sphere(r,stepsx),</p> <p><u>VRML objects:</u> „height field from image“ creates a GLView VRML image height field node.</p>
Steps x	<p>The number of subdivision in the horizontal (x) direction or the u direction for surface objects. (or the number of recursive subdivision steps for sphere)</p>
Steps y	<p>The number of subdivision in the horizontal (y) direction or the v direction for surfaces objects.</p>
Umin -umax, vmin -vmax	<p>the parameter range in the u and v direction, valid for surface types like sphere surface, plane.</p>
Radius	<p>the radius for objects like a cylinder, sphere.</p>
Height	<p>the height for objects like a cylinder</p>

Next:

New Font Logo Dialog

New font logo dialog

With this dialog a 3D logo out of a arbitrary string of text and a Windows installed TrueType font can be created.

The New font logo dialog offers the following options:

Text	a string, multiple lines are supported.
Font	pop ups a font selection dialog, to specify the type of True Type font used for creating 3D Data.
Extrude	if checked the 2D text outline will be extruded in the z direction, otherwise the text will be created as a set of flat polygons.
Extrusion factor	the amount of extrusion in the z-direction.
Top	if checked, the top set of faces of the extruded solids are generated.
Bottom	if checked, the bottom set of faces of the extruded solids are generated.
Invert	if checked the text outline will be subtracted from an enclosing rectangle, to create an "inverted" like effect. (For some letters like i or fonts with self intersecting outlines this may no work correctly)
invert size	a scale factor relative to the bounding box of the cube for the enclosing rectangle (> 1.0)
Texture Parameters	normally a xy parameter generation function will work for texture mapping of font objects. If checked for better results for the side facets of extruded objects, the texture will properly wrapped along the character outlines.
Align	Changes Text Alignment
Outline only	Only the outlines are computed, the resulting geometry if written to a VRML file will be an IndexedLineSet, otherwise an IndexedFaceSet.

Next:

[View Menu](#)

Edit menu commands

The Edit menu offers the following commands:

<u>Undo</u>	Reverse previous editing operation.
<u>Cut</u>	Deletes data from the document and moves it to the clipboard.
<u>Copy</u>	Copies data from the document to the clipboard.
<u>Paste</u>	Pastes data from the clipboard into the document.
<u>Paste Link</u>	Pastes from the clipboard a link to data in another application.
<u>Insert New</u>	Inserts and embeds an object, such as a chart or an equation in a document.
<u>Object</u>	
<u>Links</u>	List and edit links to embedded documents.

WWW menu commands

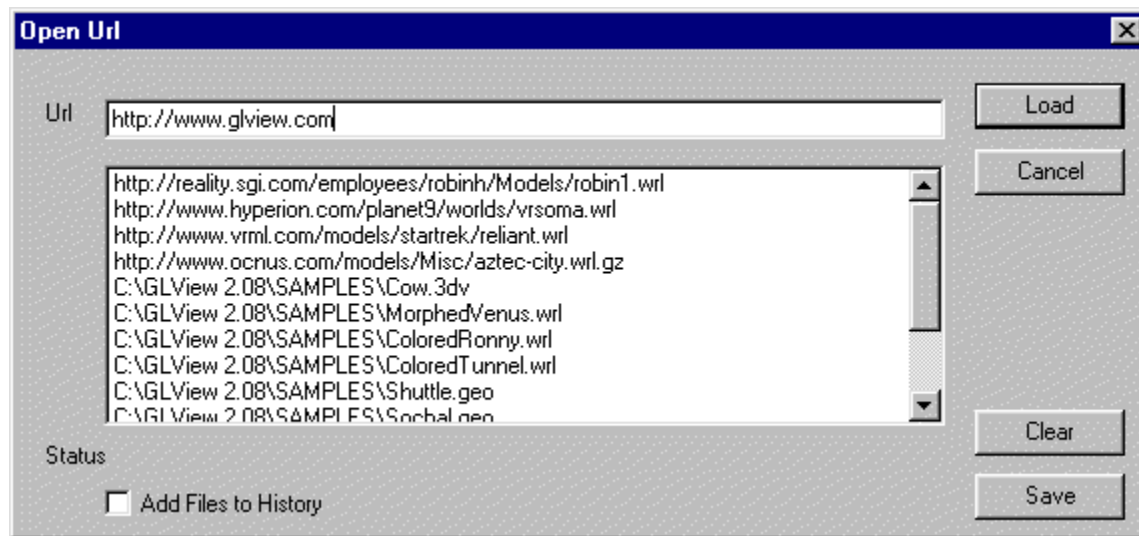
The WWW menu offers the following commands:

- Open Url** Opens a WWW VRML url using the Open URL Dialog
- Load all inlines** If the scene contains unread references to other files (local or remote), these files will be loaded. (Usefull if LOD Nodes are combined with WWWInline.)
- Abort Load** The current Network operation will be canceld. This is the same as the stop button in the toolbar. The button is gray if there is currently no background operation.
- Reload** Reload current scene, if scene has a URL it will be reloaded from host. Inlines, textures and anchors, will not be reloaded from host. Disable WWW->Options->use files from cache instead if you want to completely refresh a cached copy of the scene.
- Options** Changes WWW / VRML Options using the WWW Options Dialog

Next:

View Menu

Open URL dialog



With this dialog access to World-Wide-Web 3D VrmL scenes is managed
The Open URL dialog offers the following options:

- URL** Enter a URL here, as soon <Enter> is pressed GLView tries to connect to the specified host and to retrieve the file.
Also a local filename can be entered.
You can copy and paste a VRML url from your Web-Browser into this edit field using CTRL-V. For Netscape you can use the right mouse button menu and select "Copy this link location". GLView currently supports the http: and ftp protocol.
- History** Displays the list of recently opened documents.
A single click on a entry copies the entry to the URL edit field, a double-click directly loads the document.
- Add Files to History** If checked local files are added to the history, otherwise only WWW URL's.
- Save History** the whole history is saved to disk. Normaly done automatically.
- Clear History** The history list is cleared.
- OK** The specified URL is loaded

Next:
[View Menu](#)

WWW / VRML options dialog

The WWW Options dialog offers the following options:

Inline Loading	A VRML file can contain references to other VRML or Texture files. For a complex scene with many references this may take time. If "never" is selected references are not expanded, GLView displays unloaded Inlines with a wireframe box, if this box has been specified by the author. "if needed" means the rendering engine decides when to load a inline, "always" will load all inlines. Loading of texture files is still delayed, until Texture Mapping is enabled with Rendering->textured.
Starting Texture Load	A VRML file can contain references to texture image files. These files tend to be large, much larger than the VRML file itself. Texture display loading and rendering can be requested using the Render->Textured command or the corresponding toolbar button. This flag specifies the initial texture load mode. "Don't load" loads Textures only after a request, "ask" will ask after the scene loading, and always will directly load the textures. Default : Always
max inline level	Inlines can be deeply nested, or might containing a loop of references. This parameters specifies a maximum inline loading level.
Use ***	A VRML file can contain ShapeHints nodes controlling backface culling, light sources, cameras, backgrounds or materials. Unchecking one of these check boxes disables the corresponding VRML nodes, GLView global settings will then be used. Disabling of VRML lights is recommended, if the scene contains many lights, affecting rendering performance or resulting into a too bright image.
Keep Host Connection	If checked the socket connection to the WWW host is maintained. Usually a scene contains ininline objects refering the same host, so Network performance is improved.
Incremental updates	During inline loading / texture loading a incremental display update is done. If multithreading is enabled (default) this option is not necessary, because new elements are added to the scene automatically.
Use files from GLView cache	If checked, GLView tries to load a URL file from the cache directory, instead of retrieving it from the Internet. Example usage : a complex WRL scene has been partly retrieved from the Internet. Load the scene using the "scene.wrl.vrl" url file. Already transferred inlines + textures will be read from the cache, missing ones from the Internet. Checked by default.
Autoplay animations	If checked (default) a scene containing animation (i.e. VRML 2.0 TimeSensors or GLView animation nodes), the animation is started at the loading of the file.
Cache Directory	Specify a unique directory here, where GLView can store Internet files and which also serves as a cache for future reuse. GLView will

store all retrieved URL's into this directory.

You can manually delete files from this directory, if you need more disc-space. The vrl files are containing the original URL location of a file, they can be copied to create a personal hot list directory.

These VRL files can be dropped from the Explorer or file manager into GLView, if the corresponding datafile is present, the scene is loading from cache, missing URL's are being retrieved from the internet. GLView currently also unzip's all compressed data-set's.

**Email
address**

Your email address (for retrieving FTP files and future networking enhancements.)

**Path To
WWW
Browser**

The full pathame to your WorldWideWeb Browser, GLView will spawn this program for viewing HTML files or URL's with unknown MIME-type.. If Netscape is running, GLView will use DDE to force the WWW-Browser to display unhandled urls's.

Light Scale

a global scale factor affecting the intensity of VRML scene lights. If you enable VRML scene lights, the scene might look to bright, because the scene author has used too many or too bright ligts, use the scale factor to dim down these lights. (Default 1.0)

**Internet
Config ...
OK, Apply**

Opens the Internet configuration dialog.

The changes are applied

The Internet configuration dialog offers the following options:

**Access
Type
preconfig**

if enabled (the default) internet configuration settings (like proxy configuration) from the Windows Control-Panel settings are used.

**Use proxy
Proxy
server**

if enabled the fields below specify proxy information
Name of the proxy server.

By default, its assumed that the specified proxy is a CERN proxy. For example, "proxy" defaults to a CERN proxy called "proxy" that listens at port 80 (decimal). More than one proxy can be specified, including different proxies for the different protocols. For example, if you specify "ftp=ftp://ftp-gw proxy:21", FTP requests are made through the FTP proxy "ftp-gw" which listens at port 21 (default for FTP). All other requests (for example, HTTP requests) are made through the CERN proxy called "proxy" which listens at port 80.

**Proxy
bypass**

An optional list of host names or IP addresses, or both, that are known locally. Requests to these names are not routed through the proxy. The list can contain wildcards, such as "157.55.*int*", meaning any IP address starting with 157.55, or any name containing the substring "int", will bypass the proxy.
If this parameter specifies the "<local>" macro as the only entry, the function bypasses any host name that does not contain a period. For example, "www.microsoft.com" would be routed to the proxy, whereas "internet" would not.

Num

GLView use multiple threads for reading internet data, higher

Threads numbers means more parallel internet sessions. The minimum must be 1 thread, the default is 5.

It is currently not possible to change the proxy parameters after an internet access from GLView has already occurred. The workaroud is, to change these settings, and restart GLView.

Next:

[View Menu](#)

View menu commands

The View menu offers the following commands:

Tool Bar Shows or hides the toolbar.

Status Bar Shows or hides the status bar.

Url Bar Shows or hides the Url bar.

Next:

Camera Menu

Pixelformat menu commands

The Pixelformat menu offers the following commands:

- Set** Shows the Set Pixelformat dialog. Once a Pixelformat has been chosen, it can not be changed, restart GLView with the /x option.
- Info** Shows short information about the number of available pixelformats
- Enumerate** Shows the Set Pixelformat dialog, to allow a browse through all available pixelformats

Next:

Camera Menu

Camera menu commands

The Camera menu changes the camera action associated with a mouse drag operation in the drawing area.

The Camera menu offers the following commands:

Reset Reset the camera to view the whole object in the xy plane from the +z direction. This function is also recommended after loading of a VRML scene with a strange camera or with a camera viewing empty space. Reset will also compute proper values for the camera target distance, near and far clipping planes. After reset you can always use the Orbit camera mode, because the camera target point is in the center of the model.

Viewpoints
.... The camera viewing parameters can be manually changed. For VRML scenes containing multiple cameras, a predefined camera can be chosen. The Z distance parameter is related to the walking speed, change it if the walk speed is too small or large. For inside of a room type scenes it is useful to enter high view angles e.g. like 90 or higher. This dialog can be activated by pressing the space bar.

Move Move the camera with the mouse horizontal / vertical

Rotate Rotate the camera with the mouse horizontal / vertical around the center,
Shift: zoom horizontal,
Control: Move horizontal/vertical

Turn Turn the camera with the mouse left-right / up-down around the position

Zoom Change the zoom scale with the mouse horizontal

Roll Rotate the camera orientation (up direction) with the mouse horizontal

Walk Turn the camera with the mouse left-right horizontal,
Move in-out vertical
Shift : move horizontal/vertical:
Control : pan up/down /left right

Fly Similar to walk, but a two-click walk. The first click turns on walking, move the mouse to change direction, second click stops moving.

Relative Move If enabled camera movements Walk/Fly/Pan are relative to the current viewing direction.
If disabled movement is relative to a global world up direction. This World-Up direction is derived from the selected VRML camera (Y by default). Note VRML scenes use normally Y as up, instead of Z. The world-up direction can be edited using the Camera->Viewpoint dialog.
This mode is more convenient to walk around in room type scenes or scenes with some ground plane.

Spin If checked automatically rotate the camera until a mouse button is

pressed.

Auto Spin If checked GLView automatically enters Spin mode after a while. This mode can be enabled automatically at start up using the Options->Config dialog.

Animate Viewpoints Activating this function will do a automatic fly through all viewpoints defined in a VRML scene or the viewpoints which had been manually created using the Viewpoint dialog->Save new function.

Next:
Rendering Menu

Right mouse button menu

A click with with the right mouse button in the view area displays a menu with commonly used functions:

Next Viewpoint	Sets or animates to the next predefined viewpoint. If the current viewpoint is the last, a wrap to the first viewpoint occurs.
Prev Viewpoint	Sets or animates to the previous viewpoint. If the current viewpoint is the first, a wrap to the last viewpoint occurs.
Viewpoint s ...	Opens the viewpoint dialog. This dialog can be activated also by pressing the space bar or by using the entry in the camera menu.
Seek to	The camera is moved to the object at the mouse position. The position at the time the right mouse button was pressed is used, allowing quick access using only one mouse click. This function will also set the orbit center to the computed intersection point, afterwards the Orbit navigation mode can be used to walk around the selected object.
Camera ...	Opens the <u>C</u> amera menu
Render ...	Opens the <u>R</u> endering menu.
Tools...	Open the <u>T</u> ools menu.

Rendering menu commands

With the Rendering menu, the type of rendering is chosen.

The Rendering menu offers the following commands:

Some options are only available in the OpenGL version.

Options	Shows the <u>Rendering Options sub-menu</u> .
Style	Shows the <u>Rendering Style Dialog</u> . The rendering settings for vertices, edges, faces, bounding boxes and normals can be specified in detail.
Animate	Toggles Animation On/Off, also available as Toolbar button.
Time	Shows the <u>Time Dialog</u> Change of animation time parameters, useful if the currently loaded VRML scene contains GLView animation nodes or for VRML 2.0 scenes.
Wireframe	Changes the rendering style to wireframe, only the edges of the model are displayed.
Vertices	Changes the rendering style to vertices, only the vertices of the model are displayed.
Boxes	Changes the rendering style to bounding boxes, only the bounding box of each object in the scene tree is displayed.
Solid	Changes the rendering style to solid. Edges and faces of the model are displayed, lights are turned off.
Non Lighted	Changes the rendering style to non lighted. The faces of the model are displayed but not lighted. In order to have a visible contrast between faces, the scene should have enabled textures or color settings per face or vertex. This mode is faster than the lighted modes and also faster as solid. For certain scenes with lighting already precomputed using radiosity this mode is also recommended.
Flat	Changes the rendering style to flat. The faces of the model are displayed and are flat lighted.
Gouraud	Changes the rendering style to gouraud. The faces of the model are displayed and are smooth lighted. GLView automatically calculates the required vertex normals.
Lighted	If checked, edges or vertices are lighted for rendering modes wireframe and vertices.
Colored	If checked, the model will be rendered with local vertex colors, if available in the dataset. If there are no local vertex colors but local face colors, faces will be individually colored.
Textured	If checked, the model will be textured, if a texture has been read in with Material->LoadTexture or texture nodes are present in a VRML

scene.

Normals

If checked, vertex normals will be displayed as lines at the model vertices.

Related:

[Rendering Style Dialog](#)

Next:

[Rendering Options Menu](#)

Rendering Options menu commands

With the Rendering Options menu, rendering attributes can be changed. The Rendering Options menu offers the following commands:

Backface Cull	Toggles automatic removal of backfacing facets, enabled by default. (If the model looks wrong after input, disable or flip backface culling)
Reverse. Culling	Reverse the type of facets removed by backface culling, has a effect only if Backface Cull is enabled.
Flip Object Normals	Flip the direction of the objects normals. Useful if the object appears very dark after import from GEO or RAW files.
2 Sided Lighting	If checked, 2 sided lighting is enabled.
Local Viewer	If checked, the model will be rendered with local viewer lighting applied.
Antialiased Lines	Wireframe Rendering will be rendered anti-aliased. This takes more time to render.
Transparency	Work in progress: For VRML files containing materials with transparency, this will enable transparency using a "delayed blend" approach.

Next:
[Material Menu](#)

Rendering Style dialog

With the Rendering Style dialog detailed rendering settings can be independently changed for vertices edges face and normals.

The Rendering Style dialog offers the following options:

visible	check if item should be visible
lighted	check if item should be lighted if lightsources are enabled
smooth	check if item should be smooth shaded, i.e. color of face is smoothly interpolated depending on light-effect at corners. For edges lighted and smooth should usually be checked together.
Textured	check if item should be textured. In this context the effect is that object vertex texture parameters are used if available.
Colored	check if item should be rendered using local object per vertex or face color information, otherwise or local information is not present global settings are used.
Color	if checked color from the color edit field is used, otherwise the global material setting applies. This can be used to render faces and edges together with different diffuse colors.
Color	Color edit field (R G B number). Can be edited with the color dialog using the Color ... pushbutton.
Draw Style	Popups the Drawstyle dialog. Currently fully implemented only for vertex items. A symbol like a sphere or cube can be rendered at each vertex, which for many vertices in the model need much more time to render.

Next:

[Material Menu](#)

Time dialog

Using this dialog the current animation time parameters can be controled.

Start/Stop	This button toggles animation on/off. Available also in Toolbar.
T	the current time.
Pause	Pauses animation at current time, the time slider below can be used to drag through time.
t0 t1	Animation start and ending time.
Dt	animation time step, For high speed machines this value should be lowered e.g. from 0.1 to 0.05 or 0.01.
play realtime	instead of t / dt / t_0/t_1 the current system time is used as animation clock. This is the default setting and also recommended for playing VRML 2.0 animations.
Wrap	automatically cycles the animation

Related:

Next:

[Options Menu](#)

Material menu commands

The Material menu offers the following commands:

Edit	Shows the Material Edit dialogbox. Individual material colors can be edited by entering a Red Green Blue Tripple, or by using the Edit Button. For more information about the parameters read about the OpenGL function glMaterial. To change the "basic" color use the diffuse entry, to change the highlight color, use the specular entry.
Load	Loads a Material Setting from a file. The file format is compatible with Silicon Graphics Inventor Material files.
Background	Changes the background color using the color dialog. Can be overridden by specifying a DEF Background Info { string "r g b"} in a VRML 1.0 file or by using a Background node in VRML 2.0.
Background Image	Sets or changes a background image.
Clear Background	Clears the current background image.
Fog	Changes Fog Options
Load Texture	Loads a Texture image from a file. Currently DIB,BMP, GIF, TGA, JPEG, PPM and RGB image files are supported. If the model has no texture vertex parameters, a default xy projection is used. Use <u>Rendering->Textured command</u> to enable/disable texture mapping.
Texture Options	Changes Texture Mapping Options, including GL mapping function, repeat options and texture transformation matrix. <u>Texture Options Dialog</u>
Parameter	Opens the <u>Parameter Dialog</u> to apply custom texture vertex parameters computation to the current object.

Related:

Rendering Menu

Texture Options Dialog

Next:

Options Menu

Texture Options (Material Menu)

Use this dialogbox to change OpenGL texture mapping options. For VRML scenes containing Textures and Texturecoordinates entry Type should be set to <none> and the transformation values to the default ones.

Type	Choose a GL texture parameter function.
Min-Filter	Changes the pixel interpolation function for texture minification. nearest or mipmap_nearest_nearest is the fastest mode.
Mag-Filter	Changes the pixel interpolation function for texture magnification, e.g. if you zoom in near a object. nearest is the fastest mode, bilinear gives a better quality image, but is slower.
Repeat	Choose, if texture should be repeated in x and y parameter direction
Scale	Sets the texture matrix, using scale the texture repetition can be changed
Rotate	
Translate	
max texture size	
Perspective correction	Choose, if texture looks distored or seems to randomly jump on camera movements. No perspective correction is faster.

Related:

[Rendering Menu](#)

[Material Menu](#)

Parameter dialog

With the parameter dialog texture mapping parameters are assigned to each vertex of the current object. Parameters are associated with a GLView object and can be stored to or retrieved from a GLView data-file. GL texture generation function must be **disabled**, in order to use the objects parameters or texture mapping. Parameter generation is currently only supported for a single object scene, resulting from the loading of a 3DV / OBJ /GEO/RAW file or after Tools->Combine has been applied for DXF/VRML scenes.

The parameter dialog offers the following options:

surface	The type of 2D surface the object is mapped on xyz: the xyplane xzy the xzplane sphere a surrounding sphere cylinder a surrounding cylinder
source	object input data for computing parameters, native: objects xyz coordinate or uv rectangle for quad mesh surfaces (Default) vertex color: the current per vertex colors (if any) vertex normals: the current per vertex normals vertex parameters: the current per vertex parameters (if any)
function	type of mapping from input data to parameter space e.g. plane, sphere normally project, meaning map each vertex to the nearest point on the surrounding surface.
mapping	additional mapping function (experimental)
normalize to object bounds scale rotate translate enable	if checked vertex input data will be first normalized from the objects bounding box to a -1 1 unit cube. Should normally be enabled. additional parameter transformation. Check this to enable the parameter computation, make sure that the GL-Texture Options „function“ is switched to <None>
Apply	apply current settings, but leave dialog open.

Next:
Material Menu

Tools menu commands

The Tools menu offers the following commands:

Tree Editor Opens the Tree Editor Dialog

Morph Opens the Morph Dialog
If a VRML scene containing a GLView Morph node has been loaded the first morph node will be edited. (E.g Morphed.*.wrl)
For single object scenes (3DV Files) a VRML scene with a Morph Node will be constructed.

Defom Opens the Deform Menu

Combine If the current model is stored in a tree-database (i.e. after DXF or VRML-Input), this tree database is combined into one single object. This usually results in faster rendering performance, but some scene attributes like textures, inlines and animation nodes are lost.

Triangulate All facets of the current object are converted to triangular facets. Usefull after a object with convex facets or facets with attached holes has been imported.

Info Display information about the current object like number of vertices and facets / triangles, window size, render time...

Related:

Deform Menu

Next:

Options Menu

Deform menu commands

The Deform menu offers the following commands:

Sphere Opens the Deform Sphere Dialog .

Related:

Next:

Options Menu

Tree Editor dialog

The Tree Editor windows allows the inspection of the VRML scene tree. Double-Clicking on a item displays further sub-items:

<u>Item</u>	<u>Subitem</u>
Group-Node	child nodes
Node	fields
MF-Fields	MF-Field field elements

Nodes contained in Group-Nodes can be arbitray dragged and dropped. Cut & Copy & Paste allows arbitrary structure modification. Please note that Paste dosn't include a copy of the copied / cut node but a reference. This is equivalent of writing "USE Node" in a VRML ascii file.

GLView will automatically name unnamed nodes, if you paste a node a second time into the tree.

File

View Use refresh, if after naming / renaming nodes, the display might be out of sync.

Node

Field Edit, edit the field value of a SFField

Related:

Next:

[Morph Dialog](#)

[Options Menu](#)

Morph dialog

The Morph object modifies an object vertex coordinates, depending on time. Morphing looks best with highresolution objects, with "use normals" enabled.

Type

Type of morphing:

Sphere: the object is morphed into a sphere

Cylinder: the objects is morphed into a cylinder

Box: the object is morphed into a Box

Melt: apply the Melt effect from, Glenn M. Lewis, Dr.

Dobbs'Journal, 07 1994 P.g 86

use normals

if checked a hermite like interpolation function will be used, other wise a linear one.

Normal scale radius

scale factors for the normals

another scale factor for the destination

Related:

Next:

[Options Menu](#)

Deform sphere dialog

Works currently with single object scenes only. (3DV, Tools->comine).

A imaginary sphere will be installed in the scene, all object points inside the sphere will be attracted to the sphere center / or will be pushed away (depending on factor). Can give funny effects on objects like ronny or cow. Like parameter this effect only works on single object scenes.

The Deform sphere dialog offers the following commands:

enable	if checked, the deform sphere will be enabled, uncheck it to disable sphere.
Drag	if checked, the deform sphere can be translated with the mouse, after the dialog has been closed. After a camera menu options this drag option has to be rechecked in order to translate the sphere.
Center / radius	parameters of sphere
factor	amount of deforming <1 modest >1 large, <0 reverses direction

Related:

Next:

[Options Menu](#)

Options menu commands

The Options menu offers the following commands:

Register Filetypes	Allows the optional association of GLView with different file extensions in the Windows system Registry.
Config	Opens the <u>.Configuration Dialog</u> .
OpenGL : Pixelformat	Opens the <u>PixelFormat Submenu Dialog</u> submenu.
GL Info	Displays a dialog with information about the currently used OpenGL driver. E.g. to find out, if the OpenGL Graphics is accelerated or not.
Direct 3D : Direct 3D	Opens the <u>Direct 3D configuration Dialog</u> dialog.
Fullscreen	Switches to Direct 3D fullscreen mode, fullscreen mode can be terminated using the <ESCAPE> key.

Config dialog

The config options dialog offers the following options:

print time	if checked render time after each update will be displayed in the status bar.
Degrade	If enabled GLView will switch during camera mouse movements to a different render mode, for faster feedback. Degrade mode BoundingBox is recommended for complex VRML worlds.
Save window size	if checked, GLView will save the last window size at program end.
Win size x/y	An initial window size can be specified $x \geq 320$, $y \geq 200$. 0 means using Windows defaults, >2048 means maximized. Using a smaller size is recommended if GLView is called from an external WWW Browser and the systems rendering speed is limited using a large window size.
enable autospin	if checked, GLView starts with AutoSpin enabled.

The following options are currently only meaningful for the OpenGL version

Build triangle strips	build triangle strips for objects on file import. This could give better performance on some type of objects.
Use gl cache	Internally an OpenGL -display list for object will be build after each change, and reused if only some settings like camera are changed. (non recommended for VRML scenes with "Logic")
use gl	A gl-implementation may support extensions like the VERTEX

extensions	ARRAY extension, if checked GLView will use such extensions.
Draw directly to screen	normally rendering is done to an invisible background image buffer, which will be made visible by copying the pixel-content to the screen, at the end of the rendering cycle. If checked rendering occurs triangle by triangle directly on the screen. Useful for compare speed e.g. Wireframe GDI versus OGL, or for big scenes like Vertex-Drawstyle Sphere enabled.
Update colors	if checked, on focus change to another Windows application with a colormap (e.g. Paint program), pixel values in the GLView window will be adapted to the new system color table.
Zoom by 2	instead of rendering in fullsize, the rendering occurs in 1/4 the resolution, and the pixels are then copied to the screen. Unfortunately the OpenGL pixelcopy function is so slow, so that this function is currently useless.
16 Bit Z-Buffer	GLView by default enables a OpenGL Pixelformat with a 32Bit Z-Buffer depth, enabling this switch is forcing the selection of a 16-Bit Z-buffer. The current OpenGL z-buffer depth information is available in the Tools->Info dialog box.

Direct 3D Options dialog

The Direct 3D options dialog offers the following options:

Dither If enabled Direct 3D will dither the resulting image, resulting in less banding effects, better image quality, but a slower rendering speed

Highlights if enabled, specular highlights are displayed

Stipple enables stippled alpha

Driver Direct 3D supports several drivers:

Ramp Emulation:

Pro: very fast software rendering,

Con: some material properties don't work, color per vertex doesn't work

RGB Emulation:

Pro: all material properties work, some color per vertex support

Other drivers can appear if a graphics board with D3D hardware support is installed.

Texture Mode The different drivers support a different set of texture formats. E.g. the Ramp-Emulation driver supports only the „Palette 8“ format meaning GLView needs to reduce all texture images to a 8-Bit palette image.

Fullscreen Mode The display mode used for fullscreen rendering. A 8-Bit mode is sufficient for the Ramp Driver, a 16-Bit mode is needed for RGB mode.

Window menu commands

The Window menu offers the following commands, which enable you to arrange multiple views of multiple documents in the application window:

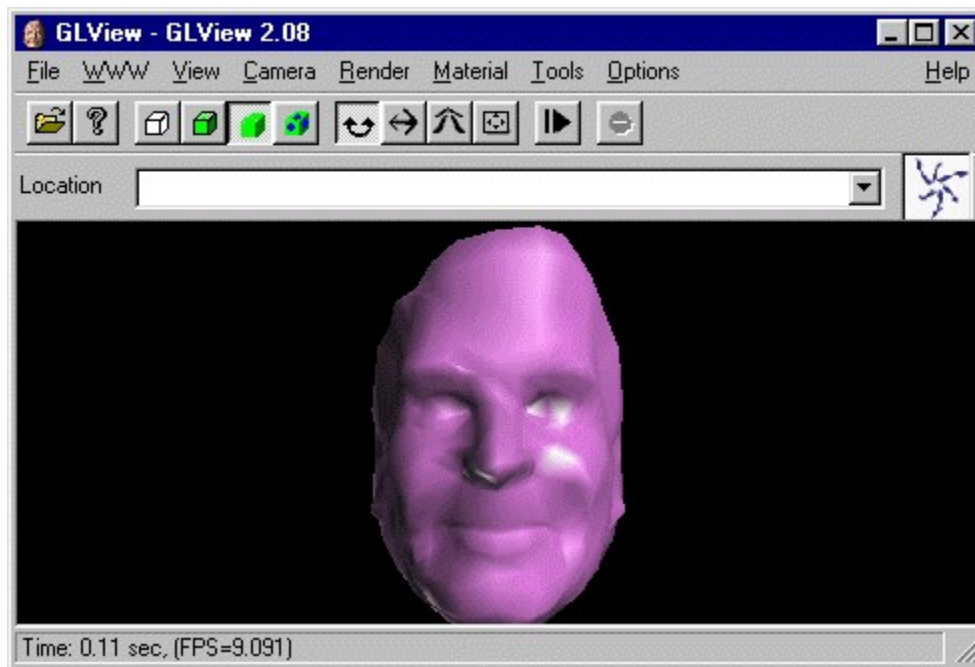
<u>New Window</u>	Creates a new window that views the same document.
<u>Cascade</u>	Arranges windows in an overlapped fashion.
<u>Tile</u>	Arranges windows in non-overlapped tiles.
<u>Arrange Icons</u>	Arranges icons of closed windows.
<u>Split</u>	Split the active window into panes.
<u>Window 1, 2, ...</u>	Goes to specified window.

Help menu commands

The Help menu offers the following commands, which provide you assistance with this application:

<u>I</u> ndex	Offers you an index to topics on which you can get help.
<u>U</u> sing	Provides general instructions on using help.
<u>H</u> elp	
<u>A</u> bout	Displays the version and license information of GLView.

Basics



Quick Tour

Start the program

drag around with the mouse (this is camera->rotate mode)

try camera->zoom mode and camera->roll mode

camera->reset will bring back the default view

try render menu:

render->wireframe (or toolbar)

render->flat

render->gouraud

..

now once again

render>wireframe

& render->lighted you get a lighted wireframe display

try material menu

material->load choose a predefined material from the list box

material ->edit

click with the mouse in the diffuse entry field,

now press EDIT to edit the diffuse color using the Windows color dialog box

choose a color , Exit & Apply

material->Load texture

choose a texture e.g. brick.rgb

using material->Texture options you can change OpenGL texture mapping parameters

try to enter scale numbers like 3 3 3 in the scale edit field

Try the filtering options only if you have time or a hardware acellerator

Switch off texture mapping using Render->textured or the Toolbar button.

Say Tools->deform->sphere

enable the check boxes for enable and drag

drag around with the mouse, the model should deform to a imaginary sphere, (which is unfortunately currently invisible). If you do not see an effect, change the radius edit field to higher numbers (negative numbers are also working).

To create a spinning logo :
Restart GLView.

File->NewFontLogo

enter the logo text.

"ok"

a 3D logo should now come up and rotates.

If you want it textured check the "Texture Parameters" check box in the dialog, and load a texture like brick.rgb with Material->LoadTexture

It's possible to create some funny symbols by using additional TrueType fonts from CorelDraw or similar programs, and using symbol fonts like windings.

Basic navigation:

For a "one object" data file or any scene after Camera->Reset has been applied
use Camera->Orbit mode

- Mouse Movements orbits the viewer around the object

- Control + horizontal movement zooms

- Shift + horizontal movement rolls ,

- Cursor keys are also orbiting around the object

For a "scene" data file like a room or house etc.

use Camera->Walk mode

- vertical mouse movements are moving in and out the scene

- horizontal mouse movements are turning the view direction to the left or right

- Shift + vertical mouse movements are turning the view direction to up or down

- Control + mouse movements are moving left/right up/down

All mouse movements are repeated after a while, movement is relative to the point, where the mouse movement was paused.

Performance tips

General :

use a small window size (a default (small) size can be specified in Options->Config)

use a small dataset

use a graphics card with fast pixel transfer.

make sure Rendering -> Options -> Backface culling is checked (might be disabled by GLVIEW)
(for VRML files a ShapeHints node in the file will have precedence)

For DXF-Files use the Tools->Combine command

Texture-mapping is quite fast in non-lighted mode : select Render->Non lighted

If acceptable disable Texture Options->perspective correction

Use wireframe, or lighted vertices modes for complex data set to adjust camera,
than switch to gouraud or enable Options->Config->degrade on move with style set to bounding box.

Enable Render->Style->Vertex->Drawstyle only for data sets with few vertices.

Try to check options->build_tristrips before loading a file.

Try to disable VRML scene lights using the www->options dialog and/or

try the Tools->Combine command, eventually with checking Options->Config->build triangle strips
before.

Textures image files could be prescaled to a power of two, and should not be too large.

eg. 128*128 might be enough (depends on a "normal" window size, and max visible texture size).

License Agreement

the following License Agreement is valid:

Lizenzvertrag für GLView 2.09

Copyright

Das Softwareprogramm GLView, das auf Installations-CD oder Programm-Disketten erworben werden kann, enthält urheberrechtlich geschützte Computerdaten. Die diesen Lizenzbestimmungen nicht entsprechende Nutzung des Programmes kann zivil- und strafrechtliche Konsequenzen nach sich ziehen. Das zu dieser Software gehörende Benutzerhandbuch, sowie der gesamte andere Lieferumfang sind auch urheberrechtlich geschützt. Holger Grahn sowie die Firma VISUAL ILLUSIONS Graphic & MultiMedia systems / MKC SOFTWARE (im folgenden MKC UND HOLGER GRAHN), sind alleinige Inhaber aller urheberrechtlichen Nutzungsrechte.

Der Erwerber von GLView hat mit dem Kauf der Datenträger und des Handbuchs noch nicht das Recht der Nutzung dieser Programme erworben, sondern nur das sachenrechtliche Eigentum verbunden mit der rechtsgeschäftlichen übertragbaren Möglichkeit, das nachstehende unwiderrufliche Angebot von MKC UND HOLGER GRAHN zum Abschluß eines Lizenzvertrages anzunehmen. Erst durch die Annahme dieses Angebots erwirbt der Käufer oder sein Rechtsnachfolger die Berechtigung zur vertragsmäßigen Nutzung der urheberrechtlich geschützten Programme. Die Berechtigung kann nur durch Vorlage der schriftlichen Bestätigung von MKC UND HOLGER GRAHN, daß ihr die Annahmeerklärung zugegangen ist, nachgewiesen werden.

Lizenzierung

MKC UND HOLGER GRAHN gewährt durch diese Vereinbarung dem Erwerber (Lizenznehmer) zeitlich und örtlich unbegrenzt das nichtausschließliche Recht zur Nutzung dieses Programmpakets und seiner Update-Versionen. Die lizenzierte Nutzung ist wie folgt eingeschränkt:

1. Der Lizenznehmer darf das Handbuch sowie die Programme und die sie enthaltenden Datenträger nicht für gewerbliche Zwecke veräußern, vermieten, verleihen oder Dritten überlassen. Die Programmleistungen dürfen ohne schriftliche Einwilligung von MKC UND HOLGER GRAHN entgeltlich Dritten zugänglich gemacht werden. Entwickelt und/oder verbreitet der Lizenznehmer seinerseits Programme, die nur zusammen mit GLView arbeiten, so hat er diese Verbindung zwischen den Programmen in dem Programm, auf der Verpackung und in den Handbüchern deutlich zu machen.
2. Die Herstellung von Programmkopien ist unzulässig. Der Lizenznehmer ist jedoch befugt, Kopien der Programme von den Disketten auf die Festplatte seines Computers zu übertragen, soweit diese Prozedur der bestimmungsmäßigen Nutzung der Programme dient. Diese Programminstallation darf sich aber nur auf einem einzelnen Computer zur Zeit befinden. Der Lizenznehmer ist ferner befugt, zur Sicherung der Programme auf geeigneten Datenträgern eine Backup-Kopie derselben anzufertigen. Diese Kopien unterliegen den gleichen Bestimmungen und Beschränkungen wie die originalen Datenträger.

Gewährleistung und Haftungsbegrenzung

1. MKC leistet 6 Monate Gewähr für die einwandfreie physikalische Beschaffenheit bei Lieferung der magnetischen, bzw. optischen Datenträger, sowie der Benutzerhandbücher. Physikalisch fehlerhafte Exemplare werden durch fehlerbereinigte ersetzt. Hinsichtlich der Software endet jegliche Gewährleistung, wenn der Lizenznehmer oder Dritte eine Veränderung an ihr vornimmt.

Wandlung und Minderung sind ausgeschlossen. Eventueller Schadenersatz beschränkt sich lediglich auf Erstattung des Kaufpreises. Haftung über diesen Betrag hinaus ist ausgeschlossen.

2. Die Erstellung absolut "fehlerfreier" Programme und Benutzungsanleitungen ist häufig nicht möglich. Deshalb wird die Gewährleistung für die Funktionsfähigkeit der Programme abweichend von den gesetzlichen Bestimmungen geregelt.
3. Jede Haftung, insbesondere Ersatzansprüche für Folgeschäden jeglicher Art, die nicht durch vorsätzliches oder grob fahrlässiges Verhalten herbeigeführt wurden, sind ausgeschlossen. MKC UND HOLGER GRAHN haften auch nicht für eventuelle Schäden, die durch von MKC UND HOLGER GRAHN beauftragten Firmen, insbesondere Distributoren und Händler, entstehen.
4. Die Haftbarkeit von MKC UND HOLGER GRAHN erstreckt sich des weiteren auch nicht auf in GLView implementierte Programme anderer Hersteller.

Schlußbestimmung

1. Der Lizenznehmer ist verpflichtet, die Software unverzüglich beim Hersteller, durch die der Software beiliegende Registrierungskarte, zu registrieren.
2. Erfüllungsort für alle aus dieser Vereinbarung resultierenden Pflichten und Verbindlichkeiten ist Norderstedt bzw. Berlin.
3. Es gilt das Recht der Bundesrepublik Deutschland. Sollten einige der hier genannten Bestimmungen unwirksam sein, so werden Sie durch gültige ersetzt. Dies berührt nicht die Gültigkeit der übrigen Bestimmungen.

Technical support

You can reach the technical support team through the following offices and ON - Line- Services:

Europe

VISUAL ILLUSIONS GMM systems
MKC SOFTWARE
Hasselbusch 71
24558 Henstedt- Ulzburg
Germany

eMail

101326.2466@compuserve.com

Fax

04193-969420

Compuserve- Forum
GOWORD: GLVIEW
Internet: <http://www.glview.com>

United Staates of America

EMD Enterprises
73 East Forrest Avenue
Suite 20
Shrewsbury, PA 17361

Support: (717) 235-4423
FAX: (717) 227-9746

eMail: support@emdent.com

WWW-SITE: <http://www.emdent.com>

Compuserve- Forum
GOWORD: GLVIEW

