

RealiView v4.10 Release Notes

16th January 1996

Introduction

Welcome to RealiView - a powerful viewer for 3D graphics either standalone or on the World Wide Web. RealiView understands complex "RealiBases" (described below), as well as VRML files describing 3D shapes.

RealiView lets you fly through 3D scenes, run simulations, and can run from within Netscape 2.0 and Microsoft Internet Explorer to give you access to 3D websites. These simulations are defined in RealiBases which are created with the RealiMation Space Time Editor (STE), which can be purchased separately. A free demonstration copy is available from our Web site, or by contacting Datapath directly. See the feedback section below for more information.

The help file supplied with RealiView gives much more information on RealiMation, so we recommend that you take a look at this.

IMPORTANT: RealiView only works with Windows 95 or Windows NT 3.51. There is a separate DOS viewer for use with Windows 3.1 and DOS.

RealiView is just one of the components of the RealiMation Visualisation, Simulation, and Game Development system, which is described in more detail below.

RealiView is freely distributable ... It can be distributed to anyone in an unmodified form, so you can show your RealiMations on computers without having to buy or install the full RealiMation application.

You may also be interested in RealiSave, the RealiMation screen savers. These are available separately (and are also free!) and you can use them to get some great 3D screen saver effects. If you use the RealiMation STE, then you can even customise your own 3D screen saver!

RealTime 3D Moving Websites!

An increasing number of websites worldwide are also incorporating RealiMation as their 3D web content creation and delivery mechanism. Look out for links to these from our website (details below).

The RealiView 3D Web plug-in works with both Netscape Navigator 2 and Microsoft Internet Explorer 3.

IMPORTANT: *If you are interested in using RealiMation for your own website, please contact Datapath at any of the addresses below.*

What is RealiMation?

RealiMation is a toolkit for people to create their own Visualisation, Simulation, and Game applications (VSG). Part of the toolkit is the RealiMation Space Time Editor (STE), which is a powerful application in its own right and can be used independently of the software development kit.

There is a demonstration copy of RealiMation available, consisting of just the STE. It is fully functional - none of the features of the full editor have been disabled. However, it has been limited to only work for 45 days. This time period should give you ample time to evaluate the product and determine if it will meet your application requirements.

Key features of RealiMation:

- Portable cross-platform API for developing your own applications.

- Entire scene descriptions - including motion etc - are encapsulated in a single database called a RealiBase. RealiBases are platform and hardware independent.
- The concept of time and motion is built into the RealiBase.
- Terrain following (i.e enabling vehicles to move naturally over irregular surfaces)
- Level of detail control
- Flexible scene optimisation for getting the best out of your renderers.
- Renderer independence. RealiMation is NOT a renderer, but uses various graphics engines to achieve speed and realism. The demo copy comes with OpenGL, RenderWare (from Criterion), and Direct3D. Other renderers are in development. You can swap renderers on the fly within the program - even when a RealiMation is in full swing!
- Full support for multi-screen and multi-CPU VRSG applications, via the API.
- A 32 bit Windows 95/NT hosted editor application (i.e this demo), to enable the creation of RealiBases. The editor is itself just an application of the API, so anything it can do, other applications can also do.
- *And much much more!* There is an amazing amount of functionality built into RealiMation. We recommend you download the demonstration version from our website (details below), or contact Datapath directly for your free (plus media costs) copy of the RealiMation STE Demo.

The RealiMation Space Time Editor (Professional Edition)

The editor is *not* a 3D modeller in the same way as packages like 3D Studio or TrueSpace. It is designed to be used in conjunction with such programs, as shown by its powerful import facilities.

The purpose of the RealiMation STE is to act as a gathering point for 3D data generated by other applications. You can then manipulate this data into a form suitable for high speed 3D display. Along the way, richness can be added to the data by applying motions, hotlinks, materials, model articulation, textures, and much more.

Although RealiMation is not a modeller, it does have some extremely powerful and easy to use model manipulation facilities. Objects can be picked, dragged, and moved around interactively. Faces can also be moved, textured, smoothed, and edited in a number of ways.

The RealiMation System

RealiMation is a complete system for the development and delivery of 3D realtime applications on a wide variety of platforms. It is not a modeller or a renderer - it is a 3D realtime visualisation and manipulation tool.

The core of the system is the RealiBase, which is a database describing all the shapes, views, textures, motion etc. within a 3D world.

RealiBases are manipulated via the RealiMation API, a compact object oriented interface to all aspects of a virtual world. The API is the only way to access a RealiBase.

Real time 3D applications use the API to deliver solutions to an enormous range of problems requiring 3D graphics. Some sample application areas are described later in this document.

The RealiMation STE (Space Time Editor) is simply an application of the API. The problem it is solving is the delivery of easy fast 3D world creation to the Windows desktop. It creates and edits RealiBases (via the API).

Other RealiMation applications delivered with the STE Professional package are:

- * RealiView, which is a freely distributable viewer for RealiBases and VRML files, so they can be given to customers that do not have the STE. RealiView is available on a variety of platforms, including Windows 95, Windows NT (Intel and DEC Alpha currently, and PowerPC in the future), MSDOS, and Silicon Graphics workstations. Porting to other

platforms is an ongoing process. RealiView includes a plugin for Netscape Navigator and Microsoft Internet Explorer. This delivers realtime 3D access to the World Wide Web, and also accepts VRML files. It has all the features of the standalone RealiView, such as hotlinks and renderer swapping.

* RealiSave, which is a screen saver for Windows 95 and Windows NT. It takes a RealiBase (created by a RealiMation application e.g. the STE), and turns it into a screen saver.

* RealiWave, another screen saver that displays a number of mathematical functions applied to a 3D grid.

* RealiClock, yet another screen saver that displays a 3D clock. Interesting point : since RealiClock uses a RealiBase defining a clock, users of the STE can edit this file to customise the clock as they wish.

In summary, RealiMation provides the creation and delivery mechanism for versatile 3D realtime environments across multiple platforms. The STE is an integral component of this system, and is in itself a very powerful 3D program that can stand on its own as a unique product.

Hotlinks

A very useful feature of RealiMation is the ability to execute "Hotlinks". Hotlinks are associated with objects within the RealiBase and describe files, executables, or WWW pages. They are activated either by flying into the object with the link, or by moving the cursor over an object and hitting the space bar, which is a shortcut to Options | Execute hotlink. You should note that if using the flying method, you MUST have the solid camera switched on.

The status bar at the bottom of the main window will show the hotlink text of the object currently underneath the cursor.

RealiMation interprets the hotlink string as follows:

- If the link is a RealiBase file, that file is loaded.
- If the link is an executable, that program is run. E.g You could attach "WinFile.EXE", and run File Manager on activation.
- If the link is some kind of document, the Windows application associated with that document is executed, and the file loaded. For example, "readme.txt" will cause Notepad to run up, with the contents of the file "readme.txt".
- If the link specifies an HTML page - ie. it begins with "http:", then your Web Browser is sent hunting for this page. You need to specify the pathname of your WWW browser to RealiView, using Options | Set Web Browser.

The possible applications of this feature are numerous. You could create a 3D program manager, for example - using only the editor and RealiView. It is the RealiBase that defines the program manager!

Another application is to link different RealiBases together. For example, the interior of an office might be loaded when you fly through the door from the outside. You might even make a RealiBase browser, which is itself a RealiBase.

Hotlinks and the RealiMation Netscape Plugin

The RealiMation plugin executes hotlinks in the same manner as RealiView with a few exceptions:

For security reasons, no hotlinks to executables are activated from the Netscape plugin.

To execute a hotlink the mouse cursor is over click the left mouse button instead of pressing the space bar.

The solid camera is always enabled when viewing RealiBases within Netscape - hotlinks will launch automatically when flown through.

Changing Display Drivers

As a package, RealiMation is display driver independent. This means that it can use a variety of other rendering engines to draw 3D scenes e.g. OpenGL and Criterion's RenderWare.

By default, RealiView uses the RenderWare driver. You can change this by selecting the Customise | Display Driver option, and choosing another driver from the list.

Using 'Full Screen' Display Drivers

Some display drivers are 'full screen' drivers, and take over the Windows desktop (for example, the Direct3D Full Screen driver).

Due to the nature of these drivers, you do not have access to menus, toolbars etc. RealiView presently offers a limited functionality whilst these drivers are in use :

- Mouse flying is still available.
- You can use F10 to start/stop the RealiMation, and F11 to rewind.

To allow you to easily change between full screen and Windows desktop, RealiView provides an 'alternate driver' mechanism. By pressing 'SHIFT + F4', you can temporarily switch to an alternate display driver. The 'SHIFT + F4' mechanism acts as a toggle - so you can use it to switch back to your original display driver.

Normally, the alternate driver is taken to be the first non-full screen driver on the list (usually RenderWare). However, by adding/amending a setting in the registry, you can set the alternate driver to be any available display driver.

You need to create a **DWORD** value, called '**AlternateDriver**', in the

HKEY_CURRENT_USER/Software/Datapath/RealiView/Channel

section. Set the value to 'X', where 'DisplayDriverX' (in the same section) is the driver you which to use as the alternate driver.

For information on how to edit the registry, see the RealiMation STE help file, and search for "Registry".

You are not limited to setting a non-full screen driver for the alternate. For example, you could set your default driver to be non-full screen, and the alternate to be full screen. The only restriction is that you are not allowed to select a full screen driver for both the default and alternate driver. In this case, the alternate driver will default to using the first non full screen drivers.

When using a full screen drivers, you may notice 'bits' of RealiView showing through. For example, the time from the RealiMate toolbar. This is due to the 'always on top' option being turned on. To disable, choose the 'Customise | Program Control' menu, and uncheck the 'Always on top' option

Hotlinks and 'Full Screen' Display Drivers

If you are using a 'full screen' driver, and a hotlink is executed which activates another application, then the display may switch back to the windows desktop, resulting in the loss of the 3D view. Examples of this can include executing '.MID' or '.AVI' hotlinks, which activate the Media Player application.

Currently, whilst using a full screen driver, hotlinks can only be activated by flying the camera into them - pressing the space bar will not work.

Using with Portable Computers

When you are using RealiView with laptop computers, you may find that when playing back a RealiView, the frame rate rapidly drops after just a few seconds, but goes back to full speed when you move the mouse. This is because the PC's power saving features are kicking in. You should disable power saving on your computer if this is a problem for you.

Redistributing RealiView

Users are free to redistribute RealiView in an unmodified form.

If you received RealiView on a CD, just copy the contents of the Viewer\DISK1 directory onto one floppy, and the Viewer\DISK2 directory onto another.

If you received RealiView on floppy disks, then just copy the floppies, labelling them "RealiView, (c) Datapath Ltd, Disk 1 of 2", and "RealiView, (c) Datapath Ltd, Disk 2 of 2".

Sample Data

The RealiMation website has a considerable number of sample 3D RealiBases. Point your browser at <http://www.realimation.com>.

If you recieved RealiView on a Datapath CD, then there will be several megabytes of RealiBases in the SAMPLES directory.

Feedback

To enable Datapath to meet your needs, your feedback is vital. We are interested not only in bugs, but in your suggestions for the way things work, or for features that you really need and do not seem to be available.

We regret to say that, since RealiView is free, Datapath cannot offer any technical support on the product. We will not accept technical support phone calls about RealiView. Our technical staff, however, always eager to be helpful, will look at email questions submitted to the address below. Again, due to the free nature of the software, a response cannot be guaranteed.

For more information on RealiMation, contact Datapath Ltd using the various means below:

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Licensing Notes

RealiView is intended for free distribution. It must not be sold, rented, or leased in whole or in part

to any party.