RealiView - Real Time Interactive Viewing Tool

Welcome to RealiView, Datapath's 3D world viewer and interaction tool.   RealiView is freely available and freely distributable (in an unmodified form), so now you can use RealiView to present RealiMation 3D worlds in real time on any computer   ...

- Fly through 3D scenes
- Run simulations
- Demonstrate your ideas to clients, prospects or friends

There are a number fo different special versions of RealiView ... for DOS, WindowsNT, Windows95 and even Silicon Graphics!!   (NB: The SG viewer is available only on request)

Interactive 3D On the Web is here now ...   Use RealiView's Internet plug-in ability to browse and fly around 3D worlds on the Web - in real time!!   Even use it as a Helper to browse the Internet!!
And find out how to use RealiMation and RealiView to create your own 3D Web pages in minutes!!

Using RealiView
Introduction to RealiView

Flight Controls
Displays the mouse and keyboard controls for flying around the 3D world

Interactive 3D on the Web
Find out how to use RealiView for real time interactive 3D on the Web!!

Hot Links

What is RealiMation?
READ THIS AND FIND OUT MORE ABOUT REALIMATION AND HOW TO CREATE YOUR OWN VIRTUAL WORLDS

Other Information

Datapath Limited

Notes:
- This help file only applies to RealiView for Windows95 and NT.

- RealiMations are created in the RealiMation Space Time Editor (STE) - more information can be found in this help file.   RealiMation STE is purchased separately.   However, if you would like to try it out and build some of your own 3D virtual worlds, then a 45 day demo version can be found on our web site at http://www.realimation.com.

- Please make sure that you have read and understood the Licence Agreement covering this product.

Using RealiView

Start up ReallView, by clicking on the icon ...

ReallView opens up with a pre-defined demonstration world ... the world may be set to begin RealiMating straightaway, use F10 to stop/start the sequence or use the RealiMate Control Bar.
(NB: You can toggle this auto play from the menus)

Now RealiView is running you can change a number of different settings for the current RealiMation:

• Change camera attributes

• Change display mode

• Change display driver

• Change the toolbars on view

• Locate an object in the world

• Alter the RealiMation sequence set up

Flight Controls

Menu Options

See Also
Interactive 3D on the Web

What is RealiMation?

Camera Modes

You can alter a number of different camera attributes for the current RealiMation.   These can be toggled from the Options menu or from the button bar.

Camera Offset

The horizontal and vertical thumbwheels which appear around the view window can be used to alter the positional offset of a camera.
Use these wheels to Pan, Orbit, Aim, Move, Roll and change FoV of the current camera.

Fixed cameras

(NB: Not all thumbwheels are available for changing the offset of a fixed camera.)
You can use the thumbwheels to position the view of the camera anywhere in the world, and once you start RealiMating the scene the camera will follow the path set.   For example you can arrange the camera so that it actually is focussed on the object it is attached to!!

Free cameras

All the thumbwheels can be used to alter the position of the camera.

Solid Camera also F8

The solid camera option is a special feature toggled by the button and from the Edit menu.   The solid camera uses a type of collision detection which stops you from flying through solid objects.   For example, if you are flying around a building, with solid camera enabled, then as you fly up to a wall, floor or ceiling, or inface any solid object in the building the camera movement will stop and not let you go on any further.   When this happens you will need to 'pull the camera back' and change direction.

Ground Flight and Free Flight

These two flying modes are toggled from one button -
Ground flight mode keeps the camera at a constant altitude within the database, pressing the mouse keys moves the view angle up and down.   This is the default.   NB: Roll is not available in ground flight.
Free flight mode does not have any constraints, it allows you to change altitude as you fly.

Terrain Following - applies to free cameras only

This fixes the camera to follow the lie of the terrain.   For example, if you have selected a 'free camera' i.e. one that is not attached to an object in the world, as you fly around, the camera will follow the landscape, moving up hills, down vallies etc.

Camera Slide

This option 'slides' the camera along a solid surface.   For example, if you fly into a wall at an angle (you will need to have soild camera enabled) then the camera will slide along the surface until it reaches the end.
NB: Your camera will need to be at an angle (flying straight on will not allow the camera to slide), and the angle will determine the direction of the slide.

Level Camera

Use this to level the selected camera.   Only free cameras can be levelled.

Reset Cameras
   Use this to reset all cameras to their original position.

Flight Controls

Interactive 3D on the Web

Menu Options

Pan - pans the camera left and right and up and down.
The movement is similar to moving your body along a straight line both sideways and up and down, while keeping your head, and so your direction, completely still.

Orbit moves the position of the camera around the orbit centre in a circular path, so that the distance from the orbit centre is maintained.   An analogy for this could be the way that the moon orbits the earth.

Aim - aims the camera in a different direction - left and right and up and down.
Aim is similar to turning your head from left to right and up and down, wothout moving your body.

Roll spins the camera while maintaining the direction in which it is pointing

Moves the camera position into and out of the scene

Field of View changes the angle of the field of view, and can be thought of as a zoom lens

Flight Controls

Simply click the mouse inside the RealiView windows and move it to fly around the file.   The flight path is determined by the author of the RealiBase - if there is a free form camera, i.e. as with the file logo.rbs, then you can fly wherever you wish to around the logo.

Mouse Controls: Left Button

Hold button down & move mouse to the left   Looking left (turn the viewpoint to the left)

Hold button down & move mouse to the right   Look right (turn the viewpoint to the right)

Hold button down & move mouse UP   Move into the picture

Hold button down & move mouse DOWN   Move out of the picture

Note: Holding down the Control key as you move the mouse will   give you finer control over the camera movements.

Mouse Controls: Right Button

Hold button down & move mouse to the left   Pans to the left

Hold button down & move mouse to the right   Pans to the right

Hold button down & move mouse UP   Pans upwards above the view

Hold button down & move mouse DOWN   Pans downwards below the view

Note: Holding down the Control key as you move the mouse will give you finer control over the camera movements.

As you pan either up or down you can then tap the left mouse key to tilt the camera viewpoint down or up to allow you to look onto the view from a different angle.   If you are panning downwards then the left mouse button will tilt the camera upwards, and if you are panning upwards then the left mouse button will tilt the camera downwards/

Mouse Controls: Left & Right Buttons together

Position the mouse in the top half of the   Rotates the camera upwards
window and hold both buttons down

Position the mouse in the bottom half of the   Rotates the camera downwards
window and hold both buttons down

Position the mouse in the left half of the   Rotates the camera to the left
window and hold both buttons down

Position the mouse in the right half of the   Rotates the camera to the right
window and hold both buttons down

Note: Holding down the Control key as you move the mouse will   give you finer control over the camera movements.

Internet Flight Controls

Camera Modes

Using RealiView

Menu Options

The RealiView menu options are:

    <u>File</u>
    <u>Options</u>
    <u>Customise</u>
    <u>Toolbars</u>
    Help which allows you to access this file and to get version information about this copy of RealiView.

Button Bar

From this toolbar, you can select different cameras as you fly through the world. The cameras available to you depend on how the RealiMation was originally set up - you cannot add new cameras. Buttons include a File | Open shortcut (Remember, the last eight files opened in RealiView are listed under the File menu option.)   From here you can also change the <u>display mode</u>, <u>alter and reset the camera</u> and <u>find an object</u>

See also

<u>RealiMate Control Bar</u>

<u>Flight Controls</u>

<u>Hot Links</u>

<u>Interactive 3D on the Web</u>

File Menu

From the file menu you can:

- Open a new file for viewing.   This option opens a standard File Open dialog.

- View RealiBase specific Information added by the creator.   This information could include, title and creation details, or instructions and hints about viewing the world.

- Select a file from the list of the previous eight files viewed

- Exit the program

Options Menu

From the options menu you can make the following changes:

Change display mode

Choose between wireframe, flat or smooth shaded - wireframe manipulation is faster - but shaded models are easier to view in virtual worlds - Experiment a little and see which mode you prefer.

Set view size

The set size option allows you to set the width and height of the view window in pixels.   This is useful when you want the constrain the view to be a particular size.   Click here for more about the settings.

Select the camera options

Solid camera: Stops you from flying through solid objects, and enables you to activate hotlinks.

Level camera: Select this option to remove the pitch and roll components of the camera.   It can be thought of as a 'straighten up' mode.   (Also see Customise | 3D Interaction for setting the middle mouse button to level the camera).

Reset Camera: Use this to reset all of the cameras to their original positions.

Ground Flight: Switch between ground and free flight.

Terrain Following: Fix the current camera to follow the terrain as you fly around.   Note: This can only be applied to a free camera.

Camera Slide: Enable slide when a camera reaches a solid object.

Execute Hotlink: Execute a hotlink which has been assigned to a placement in the RealiMation.   This option is only enabled when a hotlink is assigned to the placement.   (Also see Customise | 3D Interaction for setting the middle mouse button to level the camera).

Find: Displays a list of all the objects in a RealiMation.   Select the object you want to locate on and the view will change to display it.

See Also:
Camera Modes

Solid Camera

The solid camera option is a special feature which stops you from flying through solid objects.

For example, if you are flying around a building, with solid camera enabled, then as you fly up to a wall, floor or ceiling, or in fact any solid object in the building the camera movement will stop and not let you go on any further.   When this happens you will need to 'pull the camera back' and change direction.

Ground Flight

Toggles the mode you use as you fly around the world, to switch between free or roving flight (the default setting) and ground flight.   The ground flight mode option keeps the camera steady as you fly around, and gradually accelerates.

If you tilt the camera down while flying forwards, then your actions will be different if you are in different modes:

- if you are in **free flight** then you will fly **into** the ground,

- if you are in **ground flight mode** (button de-pressed) then you continue to fly forwards, but the viewpoint will be tilted down.

All flight controls are the same, whether you are in free or ground flight except that ground flight does not have a roll function.   Click here for flying information.

You can configure camera flight options in the Customise | 3D Interaction menu option

Once you are in mouse flight mode, moving the mouse moves the camera.

Slide Camera

Use with a free camera to 'slide' along a placement as it flies into it.
The direction of the slide (up, down, left, right) is taken from the direction and angle of the camera as it 'hits' the placement - if the camera angle is at 45degrees to the right as it hits a wall, then it will slide to the left.   This is similar to the slide camera in many computer games.

Free Flight

If you tilt the camera down while flying forwards, then your actions will be different if you are in different modes:

- if you are in **free flight** then you will fly **into** the ground,

- if you are in **ground flight mode** (button de-pressed) then you continue to fly forwards, but the viewpoint will be tilted down.

All flight controls are the same, whether you are in free or ground flight except that ground flight does not have a roll function.   Click here for flying information.

You can configure camera flight options in the Customise | 3D Interaction menu option

Once you are in mouse flight mode, moving the mouse moves the camera.

Terrain Following Camera

This is a camera within a world can be made to follow a terrain's contours.   For example where the terrain is a rolling landscape so the camera follows the hills etc., or inside a building the camera can seem to "walk up stairs".

Set view size

The set size option allows you to set the width and height of the view window in pixels.   This is useful when you want the constrain the view to be a particular size.   Simply type in the new values - as an alternative to dragging the outside of the window to the exact size required.   The size of the view window is displayed on its title bar.

Set to background size

The 'Set to background size' is only available when you have an image in the background of the view.
Click on this button to resize the view to contain the entire image.   You will notice as you do so that the pixel values change to the new size.
For example, if you have a background image of 640 x 480, then your view size will be set to 640 x 480.

Match fields of view

The 'Match fields of view' is only available when you have an image in the background. It is used when you have large background images that you wish to pan with the camera.
For example, you may have a wide image of some hills as a backdrop to your computer generated images, and as you aim the camera left and right, the image pans accordingly.

Both the current camera and the background image have a field of view (specified by the Camera and Image properties respectively). Because the resolution of the background image is fixed, the width of the view (in pixels) needs to be set to some fraction of the image size, to give the correct panning effect.

For example, you have an image that is 1000 pixels wide, and its field of view is 120 degrees, and the camera has a field of view one quarter of this (i.e. 30 degrees). Matching the fields of view will create a view width of one quarter the image width i.e. 250 pixels. Now, assuming that background panning is enabled (part of the View's properties), as you aim the camera left and right, the background image will scroll at the same rate that the camera is turning.

Customise Menu

Use this menu to customise the following RealiView settings:

3D Interaction - Configure 3D view displays and mouse sensitivity.

Display Driver - Choose the display driver you want to use for the current RealiBase.

Program Control - Configure various playback and settings for RealiView.

RealiMate - Configure the RealiMation playback options, e.g. set time deltas, change playback rate etc.

Set Web Browser - Select the Web browser you want to use with the Web/ Internet hotlink facilities.

Textures - Toggle this to enable or disable the textures.   This is particularly useful when your current display driver cannot handle complicated texture maps.

Customise | 3D Interaction

Where you have a middle mouse button, you can configure this to be used for levelling the camera or activating a hotlink.

- Toggle the option to display the 'white box' in the 3D view during mouse flight mode.
   This box can help you to fly around the world - see flight controls for more details.

- Toggle the display of the axes in the view window.
   The axes is useful for maintaining position and orientation in the world.

- Use the slider to set up the sensitivity of the mouse control for the flying.
   Note: This can have an effect on the speed of your flight.

- If your mouse has a middle button you can configure its use for either levelling the camera, or activating a hotlink.

For other customise options see:

Display Driver
Program Control
RealiMate
Main Customise menu

Customise | Display Driver

RealiMation is renderer independent.   This means that you can use RealiView with a number of different display drivers.   Currently the list of supported drivers includes RenderWare, OpenGL, Direct 3D, 3Dfx (Glide).   This list will continue to grow as more driver support is added.

From this menu option you can select the driver you want to use from the list of currently installed renderers.

• Simply select the driver from the drop down list.
  You may notice as you do so that the options in the Capabilities listing change - this is because every renderer has it's own strengths and configuration options.

Notes:
• RealiView supports some graphics accelerators which drive an external (or slave) monitor, for example 3Dfx based technology.   If you have such hardware in your machine and you select it from the list then the resolutions options drop down will become active and you will be able to select the resolution you want to view the RealiMation.

Using Full Screen Driver Displays
• RealiView also supports Direct3D running full screen on the Windows desktop.   When you choose the resolution to run at make sure that your hardware is capable of the mode you select.   (Some graphics accelerators report modes higher than their capabilities.)

• At full screen Direct 3D playback there are no menus visible on screen.   The RealiMate hotkeys (F10 to stop/play and F11 to rewind) control the sequence.

• Use Shift + F4 to return to the standard desktop using your default driver.   (This is usually RenderWare, but depends on your individual configuration.)   You can set up Alternate drivers by editing the registry.   (Click here for more information).

For other customise options see:

3D Interaction
Program Control
RealiMate
Main Customise menu

Setting Alternate Display Drivers for Full Screen Display Modes

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

Due to the nature of these drivers, you do not have access to menus, toolbars etc. although RealiView offers the following limited functionality while in full screen mode:

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

RealiView provides an "alternate driver" mechanism to allow you to easily change between full screen and Windows desktop.
Pressing SHIFT + F4 acts as a toggle to temporarily switch to an alternate display driver and then 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.

Registry Edits
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.

Click here for information on editing the Registry.

Notes:
You are not limited to setting a non-full screen driver for the alternate display.
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 driver, you may notice certain parts of RealiView e.g. the time in the RealiMate toolbar, showing through.
This is because the option 'Always on top' is enabled. Disable it from the Customise | Program Control menu.

Customise | Display Driver

Editing the Registry

The Registry is used in many ways for configuring aspects of RealiView.

Take Care: Careless editing can cause mistakes which could corrupt entries and cause problems later.   Having said that, do not worry - if you follow these instructions you should not make any mistakes.

To Access the Registry Editor from Windows95 and NT4
- Run the "Registry Editor", by selecting the "Run" command from the "Start" menu and type in *regedit.exe*.

- Alternatively you can find it using Explorer to search the windows\system directory for the file *regedit.exe* and double click on it to launch the editor.

- You can also drag it the program from Explorer onto the desktop to create a short cut for easy access.

To Access the Registry Editor from WindowsNT 3.51
- Run the "Registry Editor", by selecting the File | Run command from the Program Manager menu and type in *regedit.exe*.

- Alternatively you can find it using File Manager to search the windows\system directory for the file *regedit.exe* and double click on it to launch the editor.

- You can also create an icon in a Program Group for easy access.

To Edit the Registry
Once the Registry Editor is running, you will see that the layout is similar to Explorer / File Manager with many different sub sections.   All the edits you need to make to the registry are in the sub section for your version of RealiMation:

For *RealiView* use HKEY_CURRENT_USER / Software / RealiView

followed by the approriate sub-section e.g. /Channel for switching the display drivers

To Add Entries in Windows95
- Click with the right mouse button and press 'New' to add keys, binary, string and DWORD values and type in the new value.

- To modify a value click over it with the right mouse button and type new data, and press OK.

Customise | Program Control

- Check the '*Autoplay on startup*' to start the RealiMation sequence automatically as you open RealiView.   This is particularly useful for presentations.

- Check '*Pause when other program is active*' to pause the RealiMation sequence when other applications have focus.   This means that other applications will not 'slow down' because the system is processing the RealiMation sequence as well as the other application.

- The '*Reset time on RealiBase swap*'   is useful for when you hotlink to other RealiMation worlds. This means that you can hotlink any RealiMation to another without worrying about timing!   Again this is particualry useful for presentations.

- Click '*Always on Top'* to make sure that RealiView is aloways the visible application regardless how many other apps are open at the same time.

For other customise options see:

3D Interaction
Display Drivers
RealiMate
Main Customise menu

Customise | RealiMate

Use this menu to set up the different RealiMation playback options.   Because RealiMations are TIME based (i.e. they are NOT frame based) then the options are very extensive, making playback very flexible.

Time Control

Use real time clock - Check this option to show the RealiMation playback in "real time".   Use this option in conjunction with the Rate box.
Use time delta - Check this option and type in a value for the time delta (in seconds) which will be added to the actual animation time.   You can use this to see the position of objects in the world after this time delta.

Show Frame Rate - Check this to display the frame rate in the Status Bar.   This is disabled by default.
Show rate every * frames - The value entered here detemines the interval, in frames, that the frame rate is updated.
For example if the value is set to ten, then the frames/sec value will be updated every 10 frames. Change the value to 5 and the frames/sec will be updated every 5 frames.

Rate   These are only active when real time clock is selected

Check the appropriate radio button to set the RealiMate rate.
Normal Rate: Uses the rate set by the real time clock
Time Lapse: Increases the rate of playback by the value in the box
Slow Motion: Slows down the rate of playback by the value in the box

For other customise options see:

3D Interaction
Display Drivers
Program Control
Main Customise menu

Toolbars

Toggle the toolbars on display:

Toolbar - Includes the camera selection box, display and camera modes.

Status Bar - Used to display status details including the frame rate.

RealiMate Control Bar - Can be docked on the horizontal button bars, or floating on the desktop.

Vertical Wheels and Horizontal Wheels - Disable or enable the camera control thumbwheels around the view window.

Display Modes

Use these buttons to toggle between wire frame, flat shaded and smooth shaded displays.
The mode you choose depends on the individual view you want to display.
Wire frame and flat shaded modes are generally faster than smooth shaded views.

These modes can also be toggled from the buttons on the toolbar:

   Wire Frame

   Flat Shaded

   Smooth Shaded

RealiMate Control Bar

These buttons control the RealiMation playbacks set up for the individual files.   The icons used are standard video playback symbols - stop, play, rewind, back one frame, forward one frame and fast forward.

You can also use the F10 key to stop and start the RealiMation and F11 to rewind.

See Also:
Customise | RealiMate

Options | Find

- Use the Edit | Find menu or the button 🔍 to display a list of every object in the scene.

- Select the object you want to look and click on OK.

  The camera will locate the selected object and move to 'fit' it to the view window.

  Note: You must be using a free camera in the view. (To swap cameras simply select a new one from the drop down list - the view will update automatically.)

Interactive 3D on the Web

From V4.10 RealiView acts as an Internet plug-in for real time 3D interaction on the Web ...

When you fly over a 3D world hotlink the mouse pointer changes to a hand.   Simply click the left button to activate the link.

Flying Around
• Hold the ALT key down
• Click the mouse inside the RealiMation window
• Move the mouse to fly around the world.

The flight options are determined by the author of the RealiBase.   For example, if there is a "free" or roving camera then you can fly around the world without any constraints.   (You will need to select the camera from the drop down list)

Using RealiMation and RealiView you can make and view any Web page 3D with one line of HTML code!   Click here to find out how!

Note: We recommend that you always use the latest version of your preferred Web browser wherever possible.   RealiView will *only* work as an Internet plug in with Netscape Navigator V2.00 and above, and Internet Explorer 3 and above.

 Internet Flight Controls

See Also
RealiView as a Helper App

Building a 3D Web page using RealiMation and RealiView

Internet Flight Controls

Simply click the mouse inside the RealiView window and move it to fly around.   Simply hold the ALT key down, click the mouse inside the RealiMation window and move it to fly around the world. The flight path is determined by the author of the RealiBase - if there is a free form camera, e.g. from the menu choose Select Camera then Free Camera, then you can fly wherever you wish to around the world.

Mouse Controls: Left Button

Hold button down & move mouse to the left   Looking left (turn the viewpoint to the left)

Hold button down & move mouse to the right   Look right (turn the viewpoint to the right)

Hold button down & move mouse UP   Move into the picture

Hold button down & move mouse DOWN   Move out of the picture

Mouse Controls: Right Button

Hold button down & move mouse to the left   Pans to the left

Hold button down & move mouse to the right   Pans to the right

Hold button down & move mouse UP   Pans upwards above the view

Hold button down & move mouse DOWN   Pans downwards below the view

Note: Holding down the Control key as you move the mouse will   give you finer control over the camera movements.   Holding down the Shift key will give you coarser (accelerated) control.

As you pan either up or down you can then tap the left mouse key to tilt the camera viewpoint down or up to allow you to look onto the view from a different angle. If you are panning downwards then the left mouse button will tilt the camera upwards, and if you are panning upwards then the left mouse button will tilt the camera downwards.

Mouse Controls: Left & Right Buttons together

Position the mouse in the top half of the   Rotates the camera downwards
window and hold both buttons down

Position the mouse in the bottom half of the   Rotates the camera upwards
window and hold both buttons down

Position the mouse in the left half of the   Rotates the camera to the left
window and hold both buttons down

Position the mouse in the right half of the   Rotates the camera to the right
window and hold both buttons down

Note: Holding down the Control key as you move the mouse will   give you finer control over the camera movements.   Holding down the Shift key will give you coarser (accelerated) control.

Other Flight Models

In addition to the Normal flight model described above there are two other flight models supported. These are the *Ground Flight* model and the *Object Orbit* model.

The Ground Flight model is identical to Normal flight except that when flying forwards / backwards you remain the same height above the ground regardless of whether you are pointing down at the ground or up at the sky.   Using Ground Flight you can look down on the top of objects while flying straight over them.

The Object Orbit flight model allows you to orbit around an object by clicking with the left button to spin the object around. This flight model works best on RealiBases consisting of single objects as the centre of the orbit is the centre of the RealiBase.

RealiView as a Helper App

Hot Links

Using RealiView

General RealiView Flight Controls

RealiView as a Helper App

If you are not using the RealiMation Internet Plug-in, then you can set up RealiView as a helper application, to view RealiBases over the Web.

To do this ....

•Select the Helper Application page

•Create a new type where the mime type is x-world and the mime sub type is realibase.

•Make sure the file extension is set to rbs

•Make sure that the action 'Launch Application' option is selected and that RealiView is your preferred program.

Now when you click on a Web link to a RealiBase RealiView will be used to view it.

Hot Links

Interactive 3D on the Web

Flight Controls

Building a 3D Web Page

With <u>RealiMation STE</u> it is easy to create exciting, interactive 3D worlds quickly and effortlessly.   Once you have creates a scene with your models, and added textures, behaviours and lighting anyone can fly around it in real time using RealiView - even on your Web page!!

All you need to do is ...
1.   build your world, using the RealiMation STE, and save it (using the .RBS extension)

2.   from your Web page authoring tool, link the RealiBase into your page in either one of two ways as outlined below:

Linking RealiMations Into an HTML Page
RealiMations can be added into a Web page to appear as either:
   a sub-window,
   full-screen inside the Web browser.

1.   Embedding the RealiMation as a Sub-window
This is the best method of adding a RealiMation to the page, using the **embed** tag, as you would embed an image file.   The entry in your Web page would look something like this:

```
<embed src="filename.rbs" width=320 height=200>
```

which would display your RealiMation (where *filename.rbs* is the name of your RealiMation) as a 320x200 window inside the Web page, like this ...
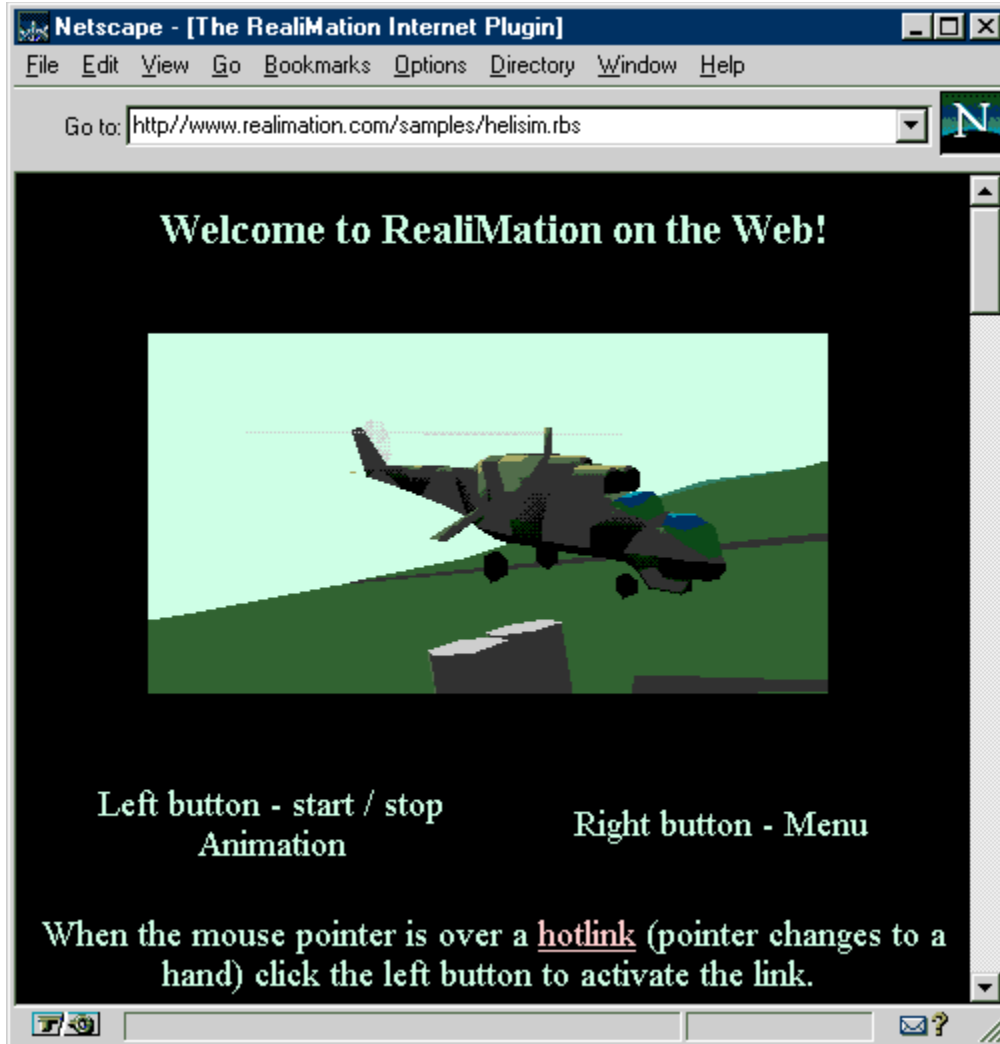
You can define the size and behaviours of an embedded RealiBase by adding parameters to the HTML code.   These are outlined under Embedding Parameters.

2.   Using the Entire Web Browser Window to Display the RealiMation

If you specify the link to a RealiBase as the address for your Web browser (e.g. type "`http://www.realimation.com/Files/RealiBases/demo/helisim.rbs`" as the link) and the RealiBase will be displayed filling the entire web browser window.

* Note: Not all Web browsers can support this type of display, and you cannot specify any parameters to modify the display.   Therefore, we would recommend that you use the embed command to include RealiMations in your Web page.

Important Notes:
1.   The Internet is case sensitive and so you must ensure that all filenames are the same in the hotlink and the directories where they are stored.

2.   All hotlinks should use the forward slash '/' as the directory separator to ensure that all browsers understand the links.   (While the backward slash '\' works for links to local files it will not work with

Netscape Navigator linking to files on the Internet.)

3. You must also check that all filenames stored in the RealiBase (hotlinks and images that are not embedded) are stored in the same case as the filenames on your Web server.

See Also:
Linking *to* HTML and Other Files From RealiMation

Embedding Parameters

There are a number of different parameters you can set with the embed command to alter the display and behaviour of the RealiMation.

Note: The parameters can be in either upper or lower case.

Width= & Height=

These parameters set the width and height of the RealiMation sub-window.   We recommend that you always set these - a typical value would be 320 x 200 as shown in the example above

AutoStart=

Set this to TRUE to start the RealiMation playback as soon as it is loaded (FALSE is the default setting)

FlightModel=

Sets the flight mode that the camera is set to as the RealiMation starts.   The default is NORMAL, and the other options are GROUND or   ORBIT.

TerrainFollowing=

This parameter enables (set to TRUE) or disables (set to FALSE) the terrain following camera.   When enabled this keeps camera at a constant height above objects in the world - so it can be used for climbing hills or stairs.   The default is disabled (FALSE).

SlidingCamera=

This enables (TRUE) or disables (FALSE) the sliding camera features - which allows a camera to 'slide' along walls.   (This is similar to the sliding cameras in popular computer and arcade games, such as DOOM).   The default is disabled (FALSE).

Typical Examples of Embedding Parameters

```
<embed src="demo.rbs" width=200 height=150 autostart=TRUE flightmodel=ORBIT>
```
would display the RealiBase "demo.rbs" (which is located in the same directory as the current HTML page) in a 200x150 window.   The RealiBase will start to playback the RealiMation sequence as soon as it has loaded and the initial flight model will be "orbit", enabling the user to spin around the world / object.

```
<embed src="http://www.realimation.com/sample.rbs" width=400 height=250
terrainfollowing=TRUE sliding camera=TRUE>
```
would display the RealiBase "sample.rbs" from the RealiMation web site in a 400x250 window and use a terrain following and sliding camera (enabling the user to climb hills and slide past obstacles).

Interactive 3D on the Web

Linking to Other Files from RealiMation

RealiMation can make extensive use to "hotlinks" which are like pointers to other files.   These can be links to other RealiBases, Web pages or other files and documents.

Links are associated with placements during world creation in the Space Time Editor, and can either be relative (i.e. searches for the linked file in the same directory) or absolute (i.e. contains a complete search string including directory, or even a complete Web address).

Hot Links

These are links to other files and applications (e.g. RealiBases, document files, programs or WWW pages) which are attached to placements within the world and activated as you fly into or click on them.

How RealiView Deals with Hotlinks

The way that RealiMation interprets the hotlink string depends on the type of link made.
For example:

- If the link is RealiBase, then that RealiBase file is loaded into the STE or RealiView.   This is useful when you want to create a large scenario, but do not want to create an enormous RealiBase file.   This feature allows you to swap files on the fly to make the scene compact and efficient.

- If the link is an executable then the associated program starts up.   For example you could attach the program *winfile.exe* to a placement, and File Manager will run each time you activate the link.

- If the link is to a document file, then the appropriate Windows application will start up and the document will be loaded.   For example, a link to *readme.txt* will invoke Notepad, and display the file.

- If the link specifies an HTML page (i.e. it begins with "http:") then your Web Browser will start up and search for and display the page.
  Note: You should set up the pathname to your preferred Web browser to using the Customise | Web Browser option.

Activating a Hotlink

Hotlinks are activated by either:

- flying into the placement
- picking the placement and hitting Space Bar (a shortcut to Options | Execute hotlink.)

Note: If you want to fly into a link to activate it, then you **must** have the solid camera enabled.

Interactive 3D on the Web

Using RealiView

What is RealiMation?

RealiMation is Datapath's flexible development toolset designed to ease the rapid creation of Visualisation, Simulation and Game (VSG) applications.

RealiMation is the first VSG development system, aimed principally at developers, to combine a very powerful delivery API supporting data driven applications across a variety of platforms.

The delivery platforms can be anything including PCs and high end SG workstation. With support for a whole host of sub-renderers, many delivery environments are available from day one. Furthermore by using its own geometry architecture, RealiMation allows real-time multi-channel network based operation.

Included in the package is a stand-alone 'world builder / editor' application, which runs on 32 bit Windows platforms (i.e. Windows'95,and NT (Intel, Alpha and more)) called RealiMation Space Time Editor (STE).

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. For example, our demonstration version comes with OpenGL and RenderWare (from Criterion) - 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 VSG applications, via the API. - The RealiMation STE enables the creation of RealiBases. The editor is itself just an application of the API, so anything it can do, other applications can do too.

The RealiMation Space Time Editor

The STE is **not** a 3D modeller in the same way as packages like 3D Studio or TrueSpace. It can 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.

Having said that 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.

Remember - everything you see in RealiView has been created in the RealiMation STE - use RealiMation STE to create your own worlds and even your own screen savers...using RealiSave!

RealiMation Screen Savers

RealiSave is freely distributable and is available from with many of the major 3D graphics accelerator cards and peripherals, including those from Number Nine, Diamond, Virtuality, etc.

Availability

RealiMation development tools are available now - call us for more details.
The RealiMation STE is also available now and 45 day demonstration versions are already on a number of PC magazine cover CDs, as well as our own Web Site.

The Web site also included additional information, and sample RealiBases so why not visit it at **http://www.realimation.com** (http://193.123.153.26/). Please visit and let us know what you think.

Look out for news of an exciting competition - design a stunning RealiMation and win a prize!!   Visit our Web Site for details of how to get your own limited run time version of RealiMation STE.

For more information and sales enquiries please do not hesitate to contact us at Datapath.

See Also

Using RealiView

Datapath Limited

Datapath has a long and very successful history in the computer graphics industry.   Founded in 1982, Datapath has been designing and supplying high performance, high quality graphics display systems to the worlds largest and most demanding companies and institutions.

Datapath Power Graphics designs, develops and manufactures outstanding graphics accelerators for all levels - both entry level and highly specialised customised designs.

Datapath Power Software is responsible for RealiMation, Datapaths VRSG development platform, and associated products, including RealiMation Editor, the World Builder editor toolset, and RealiView. Additionally, Power Software has developed the TWIN for Windows software or multiple screen Windows operation in a multitude of demanding applications, including financial dealing rooms.

Datapath Power Systems develops customised system solutions for particular customers.

Datapath Power Projects combines the three other Power Groups to offer complete solutions to particular problems calling on the wealth of expertise in the graphics and software areas.

Following a continuous development program, we pride ourselves on our support and responsive nature towards all our customers and their changing needs.   As more sophisticated equipment and techniques become readily available so we are there to exploit the power and potential that this technology presents.

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Using RealiView

What is RealiMation

Other Information

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 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 recieved 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 recieved RealiView on floppy disks, then just copy the floppies.

Label the floppies "RealiView, (c) Datapath Ltd, Disk 1 of 2", and "RealiView, (c) Datapath Ltd, Disk 2 of   2".

Flight Controls

Camera Modes

Interactive 3D on the Web

RealiMating is playing back a RealiMation sequence, using the RealiMate Control Bar.
Use hotkey **F10** to start and stop the sequence

Driver Registration

This dialog will only appear if the registry has become corrupted and you have lost your display driver information.

- Select the drivers you want to reinstall and from the <u>Customise | Display Driver</u> Properties configure a default driver to use when you restart RealiView.

- As soon as you have done this, RealiView will start up in the correct mode with the selected driver.