

Reference Manual

# Octaga Player

Version 2.3



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# 1 Introduction

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Octaga Player is a high performance, standards compliant 3D player which brings technical data to life on your computer. You can use Octaga Player to view and interact with 3D presentations, as well as to display standard image, video and audio files. It is both a standalone application and a plug-in you can use in your web pages, and display in most popular Internet browsers, as well as in Microsoft Office and PDF documents.

With Octaga Player, you can move, explore and navigate through any VRML or X3D scene.

Octaga Player complies with VRML and X3D standards. It has won wide acceptance, and is currently used by more than one million users.

## 1.1 Purpose and scope of this manual

This manual provides information about how to use Octaga Player. The main focus is the standalone program, but you will also find information on how to use the web page plug-in. The manual shows you how to get started and how to make full use of the program. It also provides a troubleshooting guide.

Some features described in this manual are marked with the word “Pro”. These features are disabled in the free version of Octaga Player, but are enabled when you have bought and registered a license for the program.

## 1.2 New in Octaga Player 2.3

- 64-bit versions of Octaga player is available for computers with 64-bit CPUs.
- Improved navigation and user interface.
- Improved rendering capabilities, including geometry shaders.
- Smoother file operations due to multithreaded loading.
- Display encrypted content (EWRL).
- Site License Solution lets you use a web server to check if your network domain is registered.
- Support for the Geospatial, HAnim and Networking components of the X3D standard.
- Full Java and EcmaScript SAI support.

## 2 Installation

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### 1.3 Installing Octaga Player

To install Octaga Player, download and run OctagaPlayer.exe. The installation wizard will guide you through the setup process.

### 1.4 Uninstalling Octaga Player

To uninstall Octaga Player, start *Add/Remove Programs* in the Windows Control Panel. Select Octaga Player from the list of installed programs. Click *Remove* and follow the on-screen instructions.

## 3 Getting started

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### 1.5 Starting Octaga Player

To start Octaga Player double-click the Octaga Player icon on your desktop. You can also start the program by clicking the *Start* button on the desktop taskbar, and then select *All Programs->Octaga Player->Octaga Player* from the *Start* menu.

When you start Octaga Player, an option window appears. This window is displayed until you purchase and register a license. In this window you can:

*Launch.* Press this button to start Octaga Player. You can display and interact with 3D presentations, but a number of functions are disabled.

*Buy Now.* Press this button to go to Octaga's web store, where you can buy a license.

*Register.* When you have bought your license, it must be registered with Octaga. When you have registered your license, you can use all Octaga Player's advanced features.

When you have purchased your license and registered it with Octaga, the program starts without this option window.

See section 3.5 *Buying and registering a license* for instructions on how to enable all of Octaga Player's features.

### 1.6 Open a file

To open a file in Octaga Player, select *Open* from the *File* menu. Locate and select the file you want to display and press *Open*.

Interactive 3D files normally have the file name extension *.WRL* for VRML files, or *.X3D* for X3D files.

You can also open files by simply dragging and dropping them into the player, or by double-clicking. In addition to X3D and VRML files, Octaga Player can also display video, image and audio files.

To view files located on the Internet, select *Open Location* from the *File* menu. In the dialog box, type the Internet address of the file you want to view.

If you want to open one of the presentations you have viewed recently, select *Open Recent* from the *File* menu and select from the displayed list.

If you don't have a suitable 3D file, you can find some examples at Octaga's web site, [www.octaga.com](http://www.octaga.com), for example <http://www.octaga.com/vrml/venus/venus.wrl>.

### 1.7 A quick tour

In Octaga Player you navigate most of the time by clicking the left mouse button and dragging. You can drag forward, backward, right or left. These movements have

different effects in the various navigation modes, but we will get to that later.

If you don't have a VRML or X3D file open yet, open one now. If you don't have one stored on your computer, you should be able to find one with an Internet search, or at the Internet addresses in the preceding section.

When you have opened a 3D file you are ready to explore the virtual 3-dimensional world.

First, click the *Fly* button on the toolbar. Click and hold the left mouse button in the viewing area and move the mouse forward. You are now moving forward in the 3D world. While you are still holding the left mouse button depressed, move the mouse left or right. You now change the direction in which you are moving.

Try the different navigation modes. As you can see, clicking and dragging can have quite different effects in the various modes. You can also try holding down Ctrl or Shift keys while you click and drag. If you get lost, or stuck inside an object, press the *Home* button. This takes you back to the presentation's starting point.

For in-depth information about navigating in Octaga Player, see section 4 *Navigation*.

## 1.8 Quit Octaga Player

To quit Octaga Player, select *Exit* from the *File* menu.

## 1.9 Buying and registering a license

Until you buy and register a license for Octaga Player, the program has the following limitations:

- The option window is displayed when you start the standalone player.
- Some of the advanced features are disabled. (See list below.)
- An Octaga logo is shown in the lower right hand corner of the display area.

In addition, you may only use the program for non-commercial purposes.

To remove these limitations, you need to buy and register a license.

To buy a license, click *Buy Now* in the option window. This will take you to Octaga's web shop where you can buy your license.

When you have bought the license you will get an e-mail confirming your purchase.

In the option window, click *Register*. Enter the required personal information and click *Get Registration Key*. You will receive a registration key by e-mail.

Copy the registration key from the e-mail and paste it **into the registration dialog box** and click *Register Now*.

You can now enjoy the full functionality of Octaga Player, and you will no longer be bothered by the option window.

### **1.9.1 Features that are disabled until you register**

These are the features that are disabled until you buy and register a license for Octaga Player:

## 4 Navigation

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The term navigation, as used in Octaga Player, means moving around in the 3D scenes displayed in Octaga Player. Describing how to move in three dimensions with two-dimensional tools is a bit of a challenge, and we tend to rely on terminology borrowed from aviation, such as roll, and from the film industry, such as zoom, tilt and pan.

Octaga presentations can offer pre-programmed animations and walkthroughs, as well as free navigation through the 3D world. The pre-programmed presentations usually offer their own user interface elements, such as buttons or menus, with which you can view the various parts of the presentation. You can, however, stop these animations and interact freely with the presented 3D scene.

### 1.10 Pointing devices

To navigate freely in Octaga Player, you need a three-button mouse. This is not as exotic as it may sound. Most modern mice have a scrolling wheel, and when you press down on this wheel it works as the middle mouse button.

### 1.11 Navigation modes

In Octaga Player there are five standard navigation modes: Walk, Fly, Examine, Slide and Look At. These modes are described in the following sections. In addition, other modes of navigation may be chosen through configuration. This is described in section 7 *Configuring the player*.

You can choose navigation modes by clicking the buttons on the toolbar, or by choosing the navigation mode you want from the *Navigation* menu.

In all modes you can move faster by pressing the Shift key while you navigate.

#### 1.11.1 Basic navigation

Octaga Player offers a complete range of navigation methods, and these are all described in detail in the next section. But you can get around in a 3D scene with a simpler approach, just to get started:

- In Walk mode, click with the left mouse button and drag forward and backward to move forward and backward along the surfaces in the scene.

Click with the left mouse button and drag to the left and right to turn left and right.

- In Fly mode, click with the left mouse button and drag forward and backward to move forward and backward in the scene.

Click with the left mouse button and drag to the left and right to turn left and right.

Fly mode is the same as Walk mode but without gravitation.

- In Examine mode, click with the left mouse button and drag forward and backward to

move around the scene on the horizontal axis.

Click with the left mouse button and drag to the left and right to move around the scene on the vertical axis.

- In Slide mode, click with the left mouse button and drag forward and backward to move up and down in the scene.

Click with the left mouse button and drag to the left and right to move left and right.

- In Look At mode, click on an object, then click with the left mouse button and drag forward and backward to move around the object on the horizontal axis.

Click with the left mouse button and drag to the left and right to move around the object on the vertical axis.

Look At mode is the same as Examine mode, except here you first select an object to examine before you navigate.

### 1.11.2 Walk mode

In Walk mode, you move in the direction you are looking, following the surfaces underneath you. It is like walking in the real world, with gravity and all.

Keyboard shortcut: Ctrl+Alt+1

The following controls are available:

Mouse:

*Left button:* Move forward and backward, turn left and right

*Ctrl + Left button:* Move forward, backward, left and right

*Middle button:* Click on an object and move around it

*Ctrl + Middle button:* Tilt and pan

*Mouse wheel:* Tilt view up and down

Keyboard:

*Arrow keys:* Move forward, backward, left and right.

### 1.11.3 Fly mode

In Fly mode, you move in the direction you are looking, independent of the surfaces underneath you. It is like Walk mode, but without the gravity.

Keyboard shortcut: Ctrl+Alt+2

The following controls are available:

Mouse:

*Left button:* Move forward and backward, turn left and right

*Ctrl + Left button:* Move forward and backward, left and right

*Alt + Left button:* Move forward and backward, roll left and right

*Middle button:* Click on an object and move around it

*Ctrl + Middle button:* Tilt and pan

*Alt + Middle button:* Tilt and roll

*Mouse wheel:* Tilt view up and down

Keyboard:

*Arrow keys:* Move forward and backward, left and right

#### 1.11.4 Examine mode

In Examine mode, you move around the point where you click in the 3D scene.

Keyboard shortcut: Ctrl+Alt+3

The following controls are available:

Mouse:

*Left button*: Move around the point where you click

*Ctrl + Left button*: Fly forward and backward, roll left and right

*Middle button*: Click on an object and move around it

*Ctrl + Middle button*: Move up and down, left and right

*Alt + Middle button*: Fly forward and backward, turn left and right

*Mouse wheel*: Zoom in and out

Keyboard:

*Arrow keys*: Rotate the object (or world) around the center of rotation.

#### 1.11.5 Slide mode

In Slide mode, you move up, down and sideways, while your angle of viewing stays the same.

Keyboard shortcut: Ctrl+Alt+4

The following controls are available:

Mouse:

*Left Button*: Move up and down, left and right

*Ctrl + Left button*: Move forward and backward, turn left and right

*Middle Button*: Click on an object and move around it

*Ctrl + Middle button*: Tilt and pan

*Mouse Wheel*: Move forward and backward

Keyboard:

*Arrow keys*: Slide forward and backward, slide sideways

#### 1.11.6 Look At mode

In Look At mode you first select an object of interest by clicking on it. The view zooms in on the object you selected, and then you can study this object from all sides and angles.

Keyboard shortcut: Ctrl+Alt+5

Click first, and then use any of the following controls:

Mouse:

*Left button*: Move around the selected object

*Ctrl + Left button*: Fly forward and backward, roll left and right

*Middle button*: Click on an object and move around it

*Ctrl + Middle button*: Move up and down, left and right

*Alt + Middle button*: Move forward and backward, turn left and right

*Mouse wheel*: Zoom in and out

Keyboard:

*Arrow keys*: Rotate the object (or world) around the center of rotation.

## 1.12 Home

To get to the starting point of a presentation, press the *Home* button, or select *Home* from the *Navigation* menu. Keyboard shortcut: Ctrl + Alt + R. This is useful if you need to get your bearings in a 3D scene.

## 1.13 Collision detection

You can turn collision detection on and off by pressing the *Collision* button in the toolbar. Keyboard shortcut: Ctrl + Alt + C.

By default, collision detection is enabled in all navigation modes. This means that objects are solid, just as in the real world. When you turn collision detection off, you can move anywhere you like, such as through walls and inside objects.

## 1.14 Viewpoints

As you navigate a 3D scene, you can save viewpoints at any time. These viewpoints are stored in a separate file. You choose viewpoint functions from the *Viewpoints* menu, or from the menu which appears when you right click in the display area.

### 1.14.1 Saving viewpoints

To save a viewpoint, choose *New Viewpoint* from the *Viewpoints* menu. Keyboard shortcut: Ctrl + v. The viewpoints you save are added to the *Viewpoints* menu.

You can also export your viewpoints for later viewing of the same 3D file. To export your viewpoints, choose *Export Viewpoints* from the *Viewpoints* menu. Type in a name for the file and press OK. You should choose a file name which contains a reference to the presentation file, to ensure that you know which viewpoints file belongs to which presentation.

The next time you open the presentation for which you stored and saved viewpoints, you will notice that the viewpoints aren't immediately available. This is because the viewpoints file is separate from the presentation file. To use your viewpoints you can either open the viewpoint file (files with an .ovf extension) instead of your presentation file, or open the presentation file first and then open the viewpoint file.

### 1.14.2 Viewpoint Tour

When you have made some viewpoints Octaga Player can take you on a tour through all of your viewpoints. Choose *Viewpoint Tour* from the *Viewpoints* menu. The viewpoints are shown in the order that you created them.

### 1.14.3 Next/Previous Viewpoint

You can move back and forth between the viewpoints you have made by choosing *Go To* from the *Viewpoints* menu, and then choosing *Next* or *Previous* from the sub-menu.

## 5 Viewing options

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In Octaga Player you can customize your view of the loaded 3D world to suit your preferences.

### 1.15 View All

You can reposition the viewpoint so the entire 3D world fits on the screen by clicking the *View All* button in the toolbar. Keyboard shortcut: Ctrl + Alt + F

### 1.16 Headlight

If you need more light, you can turn the headlight on by clicking the *Headlight* button in the toolbar. Click again to turn it off. Keyboard shortcut: Ctrl + Alt + H.

### 1.17 Fullscreen mode

To make the content fill your screen, click the *Fullscreen* button. Keyboard shortcut: Alt + Enter.

To return to normal window mode, press the Escape key.

### 1.18 View menu

You can customize Octaga Player's user interface in various ways with the functions on the *View* menu.

#### 1.18.1 Toolbar

To hide or display the toolbar, select *Toolbar* from the *View* menu.

#### 1.18.2 Status Bar

To hide or display the status bar, select *Status Bar* from the *View* menu.

#### 1.18.3 Rendering mode

You can choose how to view your VRML content:

- Vertices (dots)
- Wireframe
- Flat
- Smooth (the default)

To choose rendering mode, select *Rendering* from the *View* menu, and select the option you want from the sub-menu.

## **1.19 Reload**

To reload the current file into Octaga Player, click the *Reload* button.

## **1.20 Console window**

The console window displays which files you have opened in Octaga Player, as well as warnings and error messages. To view the console window, select *Console* from the *Tools* menu.

## 6 Recording

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In Octaga Player you can record your navigation through the 3D scene. You can create videos directly, or create a series of single image files which can be processed offline and then combined into a video file. The recorded videos can be displayed in multimedia viewers, such as Windows Media Player.

You can also make screenshot images of what is displayed in the player at any time.

Please note: The recording features are disabled until you buy a license and register your copy of Octaga Player.

### 1.21 Screenshot

To produce a single screenshot of what is displayed in Octaga Player, click the *Screenshot* button in the toolbar, choose *Screenshot* from the *Recording* menu, or press Ctrl + S. In the *Select Image File Name* dialog box, type a name for the image file and click *Save*.

### 1.22 Video settings

To configure your video settings, click the *Video* button in the toolbar, or select *Recording Settings* from the *Recording* menu. In the dialog box that appears, you can specify the properties of the video you want to record.

*Video size*: Choose the pixel resolution of the video. Use the standard settings from the drop-down menu or specify the number of pixels in the two input fields below.

You can also use the video size settings for single frame snapshots, and set the player window to be resized according to your settings.

*Frame rate*: Specify the number of frames per second. Broadcast quality video runs at 25 frames per second, but if the video is going to be viewed on older equipment, a lower frame rate is recommended.

*Numbered stills or AVI*: Choose AVI video to produce a video, or numbered stills to produce a series of single frame images. These images may then be processed in other graphics applications for enhanced quality, before being linked together as video file.

*Video Codec*: If you want to make a video, you can choose among the various video codecs installed on your computer.

*Image type*: If you want to make a series of still images, you can choose either high quality TGA images or compressed JPEG images.

If you choose JPEG images, you can use the variable setting. Choosing high quality settings make larger files, while smaller files give poorer image quality.

*Output file(s)*: Specify the name of the video file you want to make, and where to store it.

If you are making still images, choose the folder in which to store your image files.

### **1.23 Recording video**

To record video, click the *Record* button in the toolbar, choose *Start Recording* in the *Recording* menu, or press Ctrl + R.

### **1.24 Pause and restart recording**

While you are recording, you may want to quickly go from one location to another in the world or model.

To pause video recording, click the *Pause* button in the toolbar, choose *Pause Recording* in the *Recording* menu, or press Ctrl + P.

To continue recording, press the *Pause* button again.

### **1.25 Stop recording**

To stop recording video, press the *Stop* button in the toolbar, choose *Stop Recording* in the *Recording* menu, or press Ctrl + S.

## 7 Configuring the player

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### 1.26 Choosing options

The Octaga Player can be configured in the *Options* dialog box. To display the Options dialog box, choose *Options* from the *Tools* menu. The Options dialog box has six tabs: General, Rendering, Navigation, Audio, Performance and Optimization. On each tab you can set all values to their default settings by pressing the Default button. Press the *Cancel* button to cancel your adjustments or press the *OK* button to apply your changes.

#### 1.26.1 General

When you click the *General* tab the following options are available:

*Wait for all resources:* If some of the content needs to be downloaded from the Internet this check box determines if the player should wait for all resources to download (or fail) before displaying the content. Otherwise the 3D world will be loaded and textures, sound and other resources will appear after downloading is finished. Default is off.

*Show detailed content warnings:* Default is set to off. Enabling these warnings can be useful for debugging content files. The warnings are displayed in the Console window, which is accessible from the *View* menu.

*Automatic check for updates:* If this box is checked Octaga will check for updates on each start-up. Default is set to off.

*Ignore invalid content:* If this box is checked Octaga will not display content that is regarded as invalid. Default is set to on.

*Strict standard conformance:* If this box is checked Octaga will try to display everything in strict conformance with standards. Otherwise some non-standard optimizations and enhanced usability features are enabled. Default is set to on.

*Max frames per second (FPS):* Adjust the maximum number of frames per second by using the spinner, or by typing a new number in the text box. Default is set to 70 FPS. Use this setting to prevent Octaga Player from using more CPU than necessary.

*File History Length:* Adjust the number of recently loaded files to remember and display in the menu by using the spinner, or by typing a new number in the text box. Default is set to 5.

*Cache Size:* Adjust the space reserved for caching remote content files. Default is set to 50 000.

*Clear Cache:* Clear all the files currently stored in the cache.

Use Octaga as your default 3D-player:

*Use Octaga for VRML content:* Click this button to use Octaga Player as your default VRML-player

*Use Octaga for X3D content:* Click this button to use Octaga Player as your default X3D-player.

### 1.26.2 Rendering

When you click the *Rendering* tab the following options are available:

General rendering:

*Max texture size:* Use this setting to limit the maximum texture size. Large textures can cause performance problems if the total size of all textures exceed the amount of memory on your graphics card. Choose between 256x256, 512x512, 1024x1024 or hardware limit. Default is hardware limit.

*Texture size rounding:* If textures in use do not have a size that is of the format  $2^n \times 2^m$  it will be resized by OpenGL. Use this setting to select whether to round down or to the nearest factor of n and m. Default is set to Down.

*Max texture units:* Use this option to control the maximum number of layered textures used in multi-texture nodes. Default is hardware limit.

*Primitive resolution:* Use this to control the resolution of the 3D primitives: box, cone, cylinder and sphere. The higher resolution the more polygons. Default is medium.

*Text resolution:* Use this to control the resolution of the 3D text. The higher resolution the more polygons. Default is medium.

*Vertical Sync:* Use this option to enable or disable vertical synchronization between rendering and monitor refresh rate.

OpenGL specific:

*Antialiasing:* Use this option to enable antialiasing. Antialiasing reduces the effect of jagged edges and provides in general a nicer rendered image. Antialiasing may lower the framerate as this is intensive for the graphics card. Default is off.

*Antialiasing pr pixel:* Use this setting to control the quality of the antialiasing. The higher number the smoother image but more rendering intensive. Default is 4.

*Texture compression:* Use this setting to enable texture compression in OpenGL. In general this enables the content to use more and bigger textures as they are compressed. The effect of this will differ among different graphics cards, as these have different amount of memory. Setting Texture compression on may display blurred images and other artifacts on some graphics cards. Default is on.

*Separate specular color:* Enable this feature to avoid blending the specular, or highlight, color with textures. Default is off.

*Mip mapping:* Use this option to control the level of mip mapping. Mip mapping gives nicer textures when textured objects are far away and improves performance. Default is standard.

*Nurbs tessellation:* Use this to control the way NURBS curves and surfaces are tessellated. Default is static.

### 1.26.3 Navigation

When you click the *Navigation* tab the following options are available:

Use the Navigation style settings to set your preferred navigation style;

*Octaga Style*: Navigation as described in this document.

*Strict VRML*: Navigation according to the VRML standard.

*Game Style*: Navigation simulating a first person shooter. Try it!

*Automatic center of rotation*: This sets the center of rotation (in examine mode) to the estimated center of the objects in the 3D files you display. If unchecked, the center of rotation is the zero point of the displayed world.

### 1.26.4 Audio

When you click the *Audio* tab the following options are available:

*Disable audio*: Use this option to toggle sound on and off. Default is not disabled.

*Mute when inactive*: Mute the audio when the window is inactive. Default is off.

### 1.26.5 Visuals

When you click the *Visuals* tab the following options are available:

*Performance vs Visual Quality*: Drag the slider toward Performance or Quality, depending on what is important to you, and the capabilities of your computer.

If you want more detailed control, click the *Use Advanced Rendering and Performance Settings* checkbox. The *Performance* and *Optimization* tabs appear.

### 1.26.6 Performance

When you click the *Performance* tab the following options are available:

Performance VS visual quality:

*Performance VS Quality*: Use the slider to choose between 3 different set of preferences settings. The quality setting is an abstraction of all other settings that will improve visual quality. Selecting performance will set all settings that improve performance and speed. Default is the neutral setting which is a trade off between visual quality and performance.

*Custom Settings*: If individual settings are modified the Custom Settings checkbox will be checked and the performance slider will be disabled. Uncheck the Custom Settings box to clear the individual settings and use the slider.

### 1.26.7 Optimization

When you click the *Optimization* tab the following options are available:

Occlusion Culling:

*Enabled*: Enables or disables occlusion culling. Default is off.

*Size Threshold*: Objects bigger than this size will not be candidates for occlusion. Default is set to 0.3.

*Vertex Threshold:* Objects with fewer vertices than this will not be candidates for occlusion. Default is set to 1000.

*Retest delay:* The number of frames to wait, after a non-successful occlusion attempt, before retrying occlusion of the same object. Default is set to 5.

Small objects culling:

*Size Threshold:* Use the slider to control the level of objects regarded as small. Objects below this threshold will not be rendered. Default is set to 0.00.

*Automatic framerate control:* Default is off.

*Target FPS:* If you enable Automatic framerate control, you can specify your target frames per second (FPS) setting.

*Use small object culling safe zone:* If enabled, objects close to the viewpoint are not culled by small objects culling. Default is on.

*Use geometry display lists:* On some graphics cards, this may boost performance by allowing Octaga Player to use more memory. Default is off.

*Use OpenGL Extensions:* This can be disabled to check if rendering problems are caused by the OpenGL extensions. Default is on.

*Use Compiled Vertex Arrays:* This is a rendering performance option that may boost performance on some graphics hardware. However it might be disabled if causing trouble on your system. Default is on.

*Use Hardware Mipmap Generation:* This is a rendering performance option that may boost performance on some graphics hardware. However it might be disabled if causing trouble on your specific system. Default is on.

## 1.27 The configuration file

Octaga Player can also be configured by modifying the configuration file. This file is in XML format, it is called OctagaConfig.xml and is located in the Config subdirectory in the Octaga player directory. On Windows systems the default location is: C:/Program Files/Octaga/Octaga Player/Config/OctagaPlayer.xml

The available options for use in the configuration file are available at:

<http://www.octaga.com/doc/OctagaConfig.html>

To see how this file is used, try modifying the settings using the preferences panel first and observe how the configured file is modified.

## 8 Using the Octaga Player plug-in

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Octaga Player can be used as a plug-in to Internet Explorer, Mozilla Firefox (and other Mozilla based web browsers), Opera, Microsoft Office and Adobe Acrobat. (Adobe Reader enabling pending).

### 1.28 Using Octaga Player in Internet Explorer

Octaga Player will install itself as the default plug-in for VRML and X3D in Internet Explorer. If you install another player and you want to revert to using Octaga Player you can start Octaga Player in stand alone mode and choose *Option->Preferences->General->"Use Octaga for VRML/X3D content"*. For information on how to embed X3D/VRML content for display in Octaga Player see the developer page of the Octaga web site

<http://www.octaga.com/php/start.php?startpage=developer>

### 1.29 Using Octaga Player in other web browsers

Octaga Player will install itself as a plugin for VRML and X3D in Firefox, Opera and all other browsers using the Netscape plugin system. If you already have another X3D/VRML browser installed Octaga Player may not be the default player chosen by the web browser. See the web browser documentation for info on how to solve this. For information on how to embed X3D/VRML content for display in Octaga Player see the developer page of the Octaga web site

<http://www.octaga.com/php/start.php?startpage=developer>

### 1.30 Using Octaga Player in Microsoft Office

Octaga Player can be used to display VRML/X3D content in all MS Office products (and other activeX capable programs). To insert the player in a document choose "insert object" select "Octaga Control" a dialog box will appear allowing you to choose the VRML/X3D url to display.

### 1.31 Using Octaga Player in Adobe Acrobat

Octaga Player can be used to display PDF documents containing VRML/X3D content in Adobe Acrobat. For information on how to embed X3D/VRML in a PDF document see the developer page on the Octaga web site

<http://www.octaga.com/php/start.php?startpage=developer>

## 9 Creating content

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### 1.32 Creating VRML content

Octaga Player can display any file that conforms to the VRML standard. See the following link for specification and reference manual:

<http://www.web3d.org/x3d/specifications/vrml/index.html>

### 1.33 Creating X3D content

In addition to the VRML Octaga Player supports most of the X3D standard. Octaga Player allows the use of X3D nodes in VRML and X3D files.

X3D specification can be found at:

[http://www.web3d.org/x3d/specifications/x3d\\_specification.html](http://www.web3d.org/x3d/specifications/x3d_specification.html)

### 1.34 Creating Octaga specific extensions

Octaga supports the following extensions to the VRML/ X3D standards:

#### 1.34.1 Octaga nodes

Octaga Player also supports a set of Octaga specific nodes. A description of these nodes and their functionality can be found on the developer page of the Octaga web site.

<http://www.octaga.com/php/start.php?startpage=developer>

#### 1.34.2 Extra script functionality

In addition to standard VRML/ECMA script the Octaga Player supports Octaga specific script methods and built in objects. A description of these methods and objects can be found on the developer page of the Octaga web site.

<http://www.octaga.com/php/start.php?startpage=developer>

### 1.35 Debugging content files

While you are working on a presentation, the results displayed in Octaga Player may not always be what you expect. If you are having trouble with your presentation, it can be useful to see how Octaga Player interprets your file. You can export the presentation and compare the result to your original file and hopefully pinpoint the trouble.

To export a presentation from Octaga Player, select *Export* from the *File* menu (Keyboard shortcut Ctrl + E). Type in a file name and click *Save*.

You can also use this function to convert files between VRML and X3D format.

Octaga Player can give warnings when it encounters any problems in the content files. To see these warnings, enable *Show detailed content warnings* on the *General* tab in the Options dialog box, and then select *View Console* in the *View* menu.

## 10 Keyboard shortcuts

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The following keyboard shortcuts are available in Octaga Player and provide easier access to commonly used functions.

Ctrl + Alt + I to increase navigation speed  
Ctrl + Alt + D to decrease navigation speed  
Ctrl + Alt + R to reset viewpoint  
Ctrl + Alt + G to toggle gravity on / off  
Ctrl + Alt + C to toggle collision on / off  
Ctrl + Alt + H to toggle headlight on / off  
Ctrl + Alt + S to straighten up view  
Ctrl + Alt + N to cycle between available navigation modes  
Ctrl + Alt + M to cycle between graphics modes  
Ctrl + Alt + F to fit model to window  
Alt + Enter to go to fullscreen mode  
Esc to exit fullscreen mode  
Ctrl + S to save screenshot  
Ctrl + R to start recording  
Ctrl + P to pause recording  
Ctrl + T to stop recording  
Ctrl + V to record Viewpoints  
F11 to go to the next Viewpoint  
F12 to go to the previous viewpoint  
PgUp to go to the next viewpoint  
PgDn to go to the previous viewpoint  
Home to go to the first viewpoint  
End to go to the last viewpoint

# 11 Getting help

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The help menu provides access to help on using and configuring Octaga Player, in addition to other useful information.

## 1.36 Online manual

Selecting *Online Manual* displays this reference manual.

## 1.37 World Information

To display information provided by the content authors about the VRML/X3D file currently loaded, select *WorldInfo* from the *Tools* menu. The window that appears also displays the file name.

## 1.38 System Information

To display information about your computer, select *System Information* from the *Tools* menu. This displays general information about your computer, and detailed information about your computer's graphics system.

## 1.39 Check for updates

To check for updated versions of Octaga Player, select *Check for updates* from the *Help* menu. This checks the version number of the player you are using against the latest available version. If a newer version is available, you are directed to the download site.

## 1.40 About

To display the About box, select *About* from the *Help* menu. This displays version number and copyright information for Octaga Player, as well as contact information for Octaga.

## 12 Troubleshooting guide

This guide provides information on how to solve some common problems related to the installation and use of Octaga Player. If this information does not solve the problem, contact [support@octaga.com](mailto:support@octaga.com) for more help. For further contact information, see section 13 *Technical support* below.

<i>Unable to install Octaga Player</i>	If you are experiencing problems with installing the player, try uninstalling all previous versions of Octaga Player, check that your system timer is set correctly and try again.
<i>General Display problems due to outdated drivers</i>	<p>Display problems have been experienced on some hardware using outdated graphics drivers.</p> <p>Workaround: Always use the latest graphic drivers made available from the graphics card vendor or notebook manufacturer.</p>
<i>Performance degradation on Dual Core systems with nVidia</i>	<p>Performance degradation has been experienced on Dual Core systems with nVidia graphic cards.</p> <p>Workaround: Turn off OpenGL threading: Open the NVIDIA Control Panel (New) Select "3D Settings". Select "Advanced View" from the toolbar. Select "Manage 3D settings" under "Appearance". Set the value of "OpenGL threading" to "Off".</p> <p>Systems known to cause this problem: Dual Core Systems with nVidia graphics</p>
<i>Display problems due to hardware mipmap generation</i>	<p>On some graphics hardware the hardware Mipmap generation has been known to cause display problems.</p> <p>Workaround: Disable the use of Hardware Mipmap Generation (in the Option-&gt;Preferences-&gt;Optimization menu) to fix the problems.</p> <p>Systems known to cause this problem: ATI Radeon Mobility 9000</p>
<i>Display problems due to use of compiled vertex arrays</i>	<p>On some graphics hardware the use of compiled vertex arrays has been known to cause display problems. Workaround: Disable the use of compiled vertex arrays (in the Option-&gt;Preferences-&gt;Optimization</p>

	menu) to fix the problems. Systems known to cause this problem: ATI Radeon Mobility7800 FireGL
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## 13 Technical support

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Contact information:

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