ARTLANTIS TRAINING
FOR ADVANCED USERS

ARTLANTIS

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This training program reviews the main features of Artlantis. You will learn about the various presentation types such as still images, iVisit 3D panoramas, VR objects and animations, learn the principals, and the main settings.

MAIN TOPICS OF THE TRAINING

- The Media catalog and media management
- Shader types and creating a shader
- Site insertion
- iVisit in Artlantis: detailed settings for panoramas and VR objects
- Converting an iVisit panorama and VR object to mobile devices
- Animation interface: the timeline
- Setting up paths and actions

THE MEDIA CATALOG AND THE ARTLANTIS TOOLS

By default, Artlantis installs the Media catalog to this location:

ON PC   C:\Users\Public\Documents\Abvent\Artlantis\Media

ON MAC   Macintosh HS / Users / Shared / Abvent / Artlantis / Media

This path can be changed at any time in the Preferences of Artlantis.

Adding new media to the catalog:
- Purchases from the Media Store will be automatically installed into the right category and subcategory
- Old media should be converted with the Media Converter Application

The Artlantis Media Converter Application

Content of the selected folder in the old media format   Folder structure on your HD   New Media Catalog

.atls = Artlantis 5 shader file format

.atlo = Artlantis 5 object and billboard file format

.atla = archive file format

To get the components of each of them, you'll need to explode them with the

Artlantis Implode Explode Application

SHADER TYPES

here are two main shader types:

1/ PROCEDURAL SHADERS

The Basic shader is the simplest shader among all. Most of its parameters are defined through colors.

Procedural shaders with Fresnel transition:
– Fresnel Water shader simulates realistic water surfaces
– Fresnel Glazing shader is excellent for windows and curtain walls
– Fresnel diffuse shader simulates complex surfaces like car paint
– Transparent Fresnel shader is for partially transparent and partially reflective surfaces

Light emitters:
– Light Plane shader is optimized for plans only
– Neon light shader is for 3D shapes.
– Glass plane shader is a transparent yet light emitting shader to enhance the lighting of an interior

NOTE
Use carefully the light emitting shaders! They are quite time consuming and charge the calculation time of the final rendering. The most demanding is the neon light shader.

2/ IMAGE SHADERS
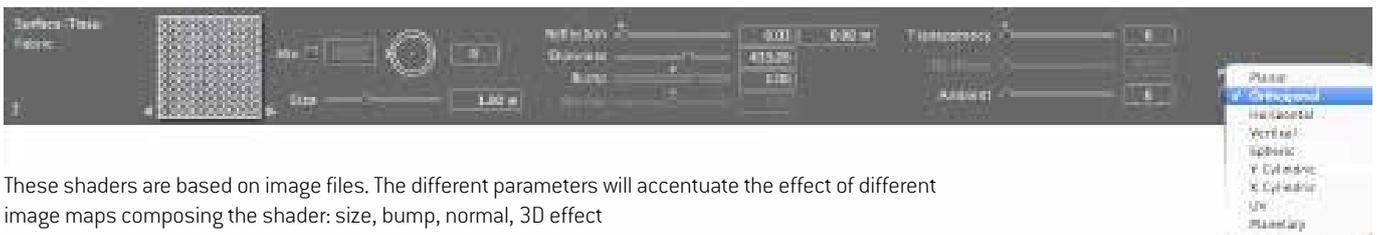
These shaders are based on image files. The different parameters will accentuate the effect of different image maps composing the shader: size, bump, normal, 3D effect

New image shaders:
– Shaders with 3D effect are equipped with a so called virtual displacement map, or parallax map
– Mosaic shader without repetition effect
– Lawn and water shaders able to mix multiple maps and random distribution

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SHADER EDITOR

First, you need to prepare the images you will use for the new shader. You don't need large image files for that, it's more important to have them well-prepared, evenly lit, and well-cropped to avoid ugly patterns. The images you will use are the following:

A small image cropped from the diffuse map for the preview of the shader in the Catalog.
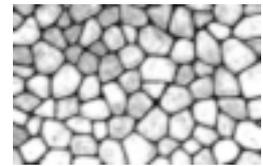

Diffuse map: should be evenly lit and carefully cropped
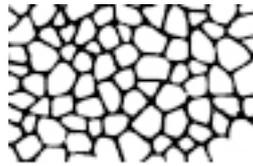
A black and white image is used for bump map to simulate bumps and wrinkles on a surface

The normal map defines the position in space of pixels by colors. This map will simulate the irregularities of tiles and distort the reflected image on the marble surface.

3D effect map add more depth to stone walls for example without increasing the number of polygons.

When creating a new shader, you always open the settings of an existing shader and re-save it with another name. Therefore, it's best to start by opening the settings of the simplest shader in Artlantis called Basic:

To enter images, you can either drag and drop the images into the selected squares, or just double click in the squares to browse your hard drive.

— Start by adding the image of the Diffuse and continue with that of the Preview. Enter the correct values for the width: it will allow you to size the shader afterwards in the shader inspector.
— Set the reflection and shininess. Any value you define here will become the default parameter of the future shader

When the shader is set, give it a name and save it as a new shader. As soon as the operation is finished, the settings of the new shader will be highlighted in the shader inspector.
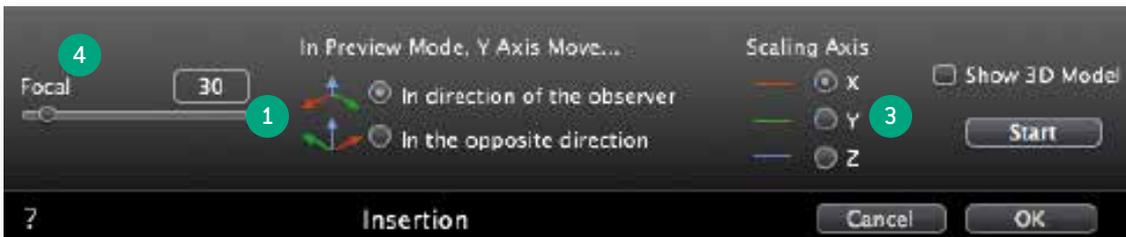
SITE INSERTION

As soon as a background photo is added to the scene, the "Insertion…" button turns active and you can open the Site Insertion dialog box.

Any photo taken with your digital camera can be used as a background. When using it for the insertion, you'll need to keep the original proportions without cropping it at all.


Things to do and decide:

1. Choose one of these two options: are the positive sides of the X, Y, Z axes pointing toward the horizon or toward the camera?

2. Set the axes on the background image and on the 2D window, too.

3. Choose the axis for the scale. The yellow dot will help you to set graphically the dimension in the preview and in the 2D window, too.

4. If you know the focal of your camera used for the photo, set it now.

If you are ready with these settings, make the model visible (in the event it was hidden) by checking the Show 3D Model checkbox, and launch the calculation. You can still fine tune by changing the position of the axes or playing with the focal. Be aware that small moves generate important changes.

Validate, when you think you are done. The palette will close and the camera will be locked. You can unlock it by clicking on the lock icon next to its coordinates in the perspective inspector.

Foreground images can mask part of the model and thus simulate complex situations.


✓Foreground   ✓3D Model   ✓Background
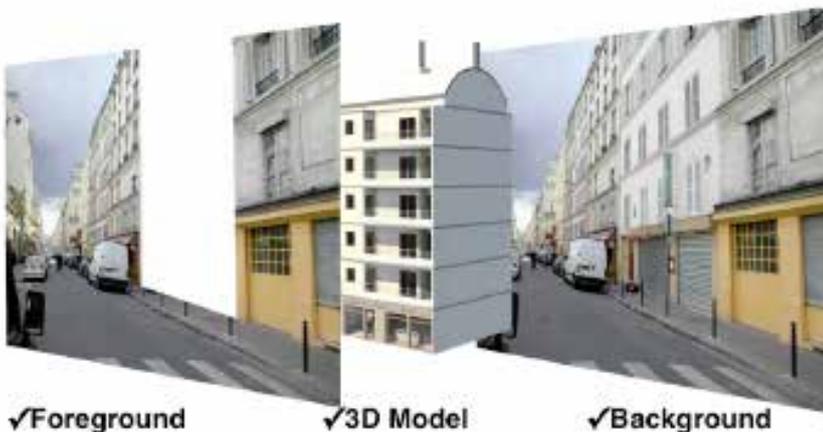
IMPORTANT
Always use the same image for both the foreground and background. The foreground needs transparency in some portions, which can be set previously in an external photo editor.

iVISIT PANORAMA

The iVisit 3D Panorama helps you creating a guided tour of the 3D model. At each node, the camera stays still and it turns around in 360 degrees. This is a Flash based presentation mode you can open in any internet browser.

To navigate in the final panorama, just hold down the left mouse key and drag the mouse on the screen. Links may appear time to time: select them and switch to the next node. You can also open the drawer at the bottom side of the window containing all nodes and select from there:
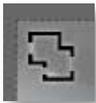
If you see this icon at the upper-left hand side of the window, it means that the panorama includes parallel views as well. These parallel views help your orientation and to better understand the project. Nodes can be selected from here too.

This icon at the upper-right hand side of the window manages the orientation, the first view one can see when switching to a new node. By default, this function is turned off: the node will show you the view you defined in Artlantis. By turning it on, the switch may become smoother by maintaining the direction of the visit.

In Artlantis, the panorama inspector groups similar parameters like perspective views. You can customize separately each panorama. Nodes belonging to the same panorama will share the same lighting, background, rendering paramteres or post process settings.

The drawer stores the list of panoramas and the belonging nodes.

To dos:
- Artlantis creates the first panorama with the first node. You can add more nodes and change their name. The name of nodes are the names of linkes appearing during the navigation. Link them in the 2D window.
- Go into the parallel views to prepare some if you wish to add to the panorama. You can add them in the panoramas inspector.
- Set the rendering options and launch the calcualtion or save it for a later computing. The output format will be .html. In the folder containing the .html file, you will find another one for the assets and one containing the free Flash player.

iVISIT 3D VR OBJECT

The iVisit 3D VR Object is great to present volumetries. Regardless if it's a building or just a small piece of furniture, you can turn the 3D model all around on the screen and view it easily from all sides. Artlantis will save a Flash based presentation you can easily open in any internet browser. The Flash player is automatically added to the folder resulting after the final calculation.

In Artlantis, the VR object inspector groups similar parameters like perspective views. You can customize separately each VR object:
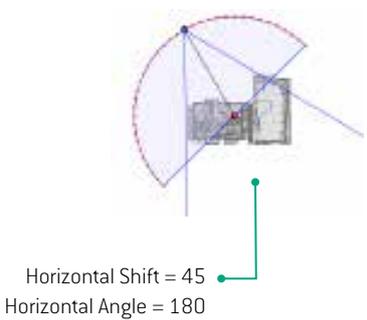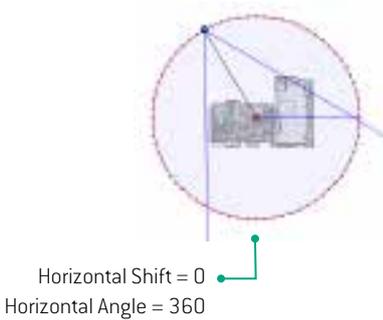

The preview allows you to navigate the same way like in a final VR object presentation.
The path of the camera can be controlled in the 2D window. This is in fact a huge sphere and the camera moves on it in all directions. You can edit this sphere and set up customized presentations:

— The camera can move on the surface of a complete shpere, or just a half sphere or only a segment of the sphere. Choose from one of these three presets from the inspector.

— You can set the number of frames to be calculated for the horizontal and vertical direction. The total number of images composing the final VR object will be automatically highlighted at each change.
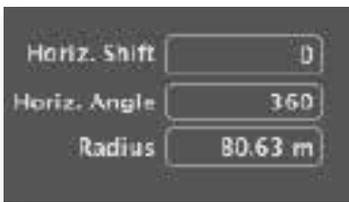
— In the 2D window, the blue line can be stretched to change the Radius of the sphere. You can also enter exact values at the appropriate field in the inspector.

— The Horizontal Shift and Horizontal Angle will help you to edit the sphere vertically.

Horizontal Shift = 0
Horizontal Angle = 360

Horizontal Shift = 45
Horizontal Angle = 180

Set the rendering options and launch the calcualtion or save it for a later computing. The output format will be .html. In the folder containing the .html file, you will find another one for the assets and one containing the free Flash player.
When opening a VR object, the first view will be that of the preview seen right before launching the calculation.

CONVERTING AN IVISIT PRESENTATION TO MOBIL DEVICES

First you'll need to convert the Flash based iVisit panorama or iVisit VR object into an acceptable format for mobile devices. To do that, you'll use the iVisit Builder app installed together with Artlantis.
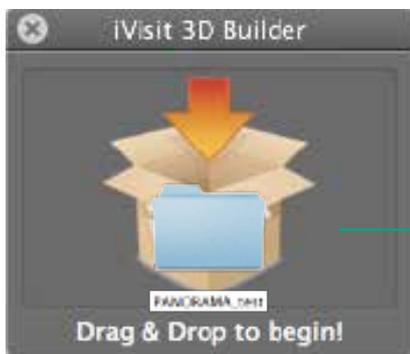
Double click on the icon to open the app. It' a small window where you'll drag and drop the panorama folder. The conversion will automatically start and result in a .pno file for panoramas and .vro file for VR objects.

On your mobile device, you'll need to install the iVisit 3D app you can download free of charge from the:
— Appstore for iPad or iPhone, and
— Google Play for Android

Use Box or Dropbox to add the .pno or .vro to your mobil device on both iOS and Android platform! First create a folder with the name: iVisit 3D in Box or Dropbox and add the .pno or .vro file to it.

You can also connect your device to your computer.
— For iOS devices, you'll use iTunes.
— On Androids, you can add it to the existing iVisit 3D folder or any custom folder. The iVisit 3D app will automatically be detected when opening the .pno or .vro file.

ANIMATION

In animation, Artlantis will open a new palette called timeline. It displays the duration in time assigned to sequences and allows you to record or edit actions.

The timeline can be displayed in two different ways:

— At the bottom of the Artlantis window: it contains all navigation, recording features and allows you to switch back and forth between animated elements. It's perfect when you set and record new actions, or edit the general settings of sequences.


— A hierarchical timeline which opens up in a separate window. This dialog displays all actions and animated items in a list. You can easily review, control and edit graphically by grabbing the key frames and changing their position in time. It's the perfect way to fine-tune your edits and synchronize actions.
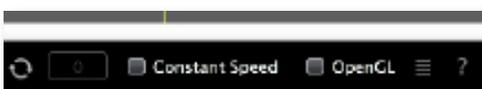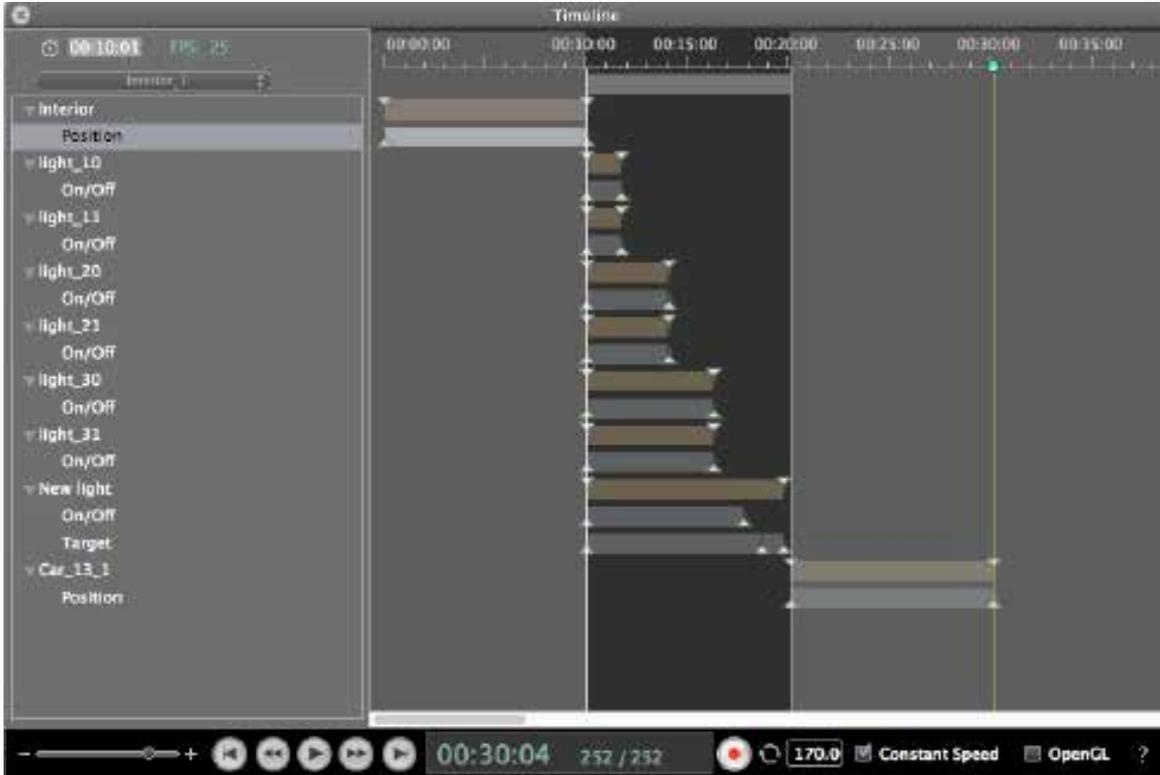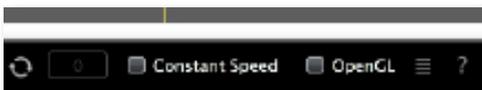
Click on the list icon at the lower-right hand-side of the timeline to open it in a larger window called hierarchical timeline.

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CREATE A PHYSICAL PATH

Physical paths can be assigned to cameras, objects or even light sources.
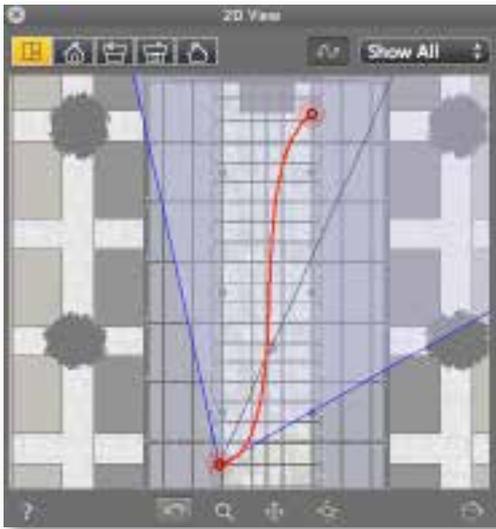
How to do it?
Open the 2D window and activate the Edit Path function.

Drag the camera from its initial position into the final position. Artlantis will generate a path you can edit in all views with the help of the tangents. With a left click on the path, you can add new control points and new tangents.

When you are done, close the Edit Path function.
The camera will move evenly along this path. If you want to stop it or change its speed, you will need to work on the TimeLine and create further actions to it.

By default, the animated item moves with a constant speed along a path. You can however change for a gradual pick-up and slow down at both ends of a sequence by unchecking the Constant Speed checkbox.
The Open GL option will reduce the prevew to a pencil drawing style. This will ease reviewing and controling the animation paths.

CREATE ACTIONS ON THE TIMELINE

Any change you assign to a Heliodon, artificial lights, objects behavior, shaders or similar, will be recorded as an action on the timeline. To make an action, follow these steps:

- Open the appropriate inspector and drag the play head in the start point on the timeline and turn on the recording mode
- Drag the play head into the first moment where the first action will happen and make the changes in the inspector. Repeat these steps as many times for as many actions you wish to set.
- Turn off the recording mode

Artlantis will record the key values through key-frames and interpolate the transitions in-between.

Key-frames can be deleted (drag the play head over it, make a right click on the head and choose delete), or duplicated (drag a copy by holding down the Alt key on your keyboard).

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