

BROCHURE

## ABOUT THEA RENDER

Thea Render is a commercial solution that contains both state-of-the-art biased and unbiased engines, and also Presto engine, that enables high speed rendering through the use of NVidia® CUDA® GPU technology as well as CPU based acceleration. Our robust physically based material system features advanced layering system and is the heart of our render engine, producing realistic high quality renders. Thea Render also comes with high quality materials exclusive for our licensed users, integration with various modelers, and advanced features such as Photometric Analysis, Colimo Support and many more.

## SUPERIOR IMAGE QUALITY

For visualization the natural way of lighting and physically correct materials play a very important role. Thea Render offers light simulation and a unique material system to ensure that all your images will take advantage of these essential qualities. No matter whether you render a simple interior scene or a detailed product presentation with complex materials the image tells a whole story for itself. We help you focus on your artistic expression while Thea takes care of the final result.

## USEFUL LINKS

For more details and download links please visit the following websites:

- Thea Website
- Thea Forum
- Thea for 3dsMax
- Thea for Blender
- Thea for Cinema4D
- Thea for SketchUp

## THEA PRESTO

Thea Presto is a new engine, in the framework of Thea Render which has been written from the ground up harvesting all your computing power. It uses all your CPUs and GPUs to deliver astonishing raw performance. This means fast, very fast, rendering on top of Thea's unmatched quality. **Take the tour!**

## SUPERIOR IMAGE QUALITY



Image by Massimo Siracusa

## SUN POOL CAUSTICS



Image by Sandro Sorce

# UNBIASED ENGINE

Thea Render supports a superior unbiased core which one is the most advanced in the market and delivers stunning images without any compromises. All possible paths of lighting transfer are explored, delivering the highest accuracy without any artifacts. Sun-pool caustics and terminator artifact are robustly handled offering stunning results.

## LIGHT SIMULATION

A strong mathematical framework has been developed that has led to a very robust unbiased core. This way it can be also seen as a light simulation tool, performing calculations in the full visible spectral space (380-780nm) and including advanced phenomena like volumetric scattering and spectral index of refraction.

## TRUE VOLUMETRICS & SSS

One of a few commercial renderers resolving participating media lighting transfer, with full unbiased accuracy. Sub-Surface Scattering is resolved with full unbiased accuracy using the actual physically-based BSSDF model.

## INSTANT RELIGHT

Ability to use different image buffers per light group, so as to combine these buffers in a post-process, still maintaining unbiased quality. Ideal for producing lighting animations with a fraction of render time.

## ATTENTION TO DETAILS

Thea unbiased engines can robustly resolve particularly difficult situations. Such cases are the sun-pool caustics problem and the terminator artifact where our solution works out-of-the-box producing smooth artifact-free renders.

## TWO SUB-ENGINES

Thea comes with two, finely-tuned, engines that are optimized in terms of performance, for different kind of scenes. Unbiased engine TR1 is optimal for exteriors and scenes with dominant direct lighting while unbiased engine TR2 is optimal for extremely difficult indirect and caustic lighting.

## RESUME/MERGE RENDER

Ability to stop a render in progress and resume later without losing the progress. An ideal feature when the machine needs to be used for other work or progress needs to be transferred to another machine.

## ZERO SETUP TIME

Unbiased core setup is effortless; results come out as they are in reality, without any artifacts and the user can focus exclusively on bringing his ideas into life without fiddling with any engine parameters.

# BIASED ENGINE

Thea Biased engine (Adaptive BSD) uses interpolation schemes such as irradiance cache to render in shorter times and is implemented in a way that more effort is put where it is needed most. Furthermore this effort is driven by perceptual criteria generating high quality results that are perceived naturally.

## GLOBAL ILLUMINATION

### Field Mapping - A New Revolutionary Approach

Field mapping is a new proprietary technique that evaluates consistently the lighting than cannot reach easily the viewer. With traditional biased engines the global illumination is often noisy and even when Final Gathering is coupled with Photon Mapping. This results in blotches in the final render. But with Field Mapping, evaluation becomes easy and it generates the expected high quality result without any troubles.

### Final Gathering

A gathering can be invoked on diffuse and translucent surfaces in order to compute the irradiance. It is either used with minimum depth coupled with field mapping, or alone with increased depth.

### Irradiance Cache

Used in conjunction with final gathering to accelerate rendering by reusing (interpolating nearby gathering values.

### Caustics

They can be evaluated either by field mapping for small area lights or point lights or by final gathering for large area lights.

## DIRECT LIGHTING

### User-controlled

All lights can be parameterized so that user-controlled per-light can take place resulting in fast renders for small scenes.

### Perceptual-based

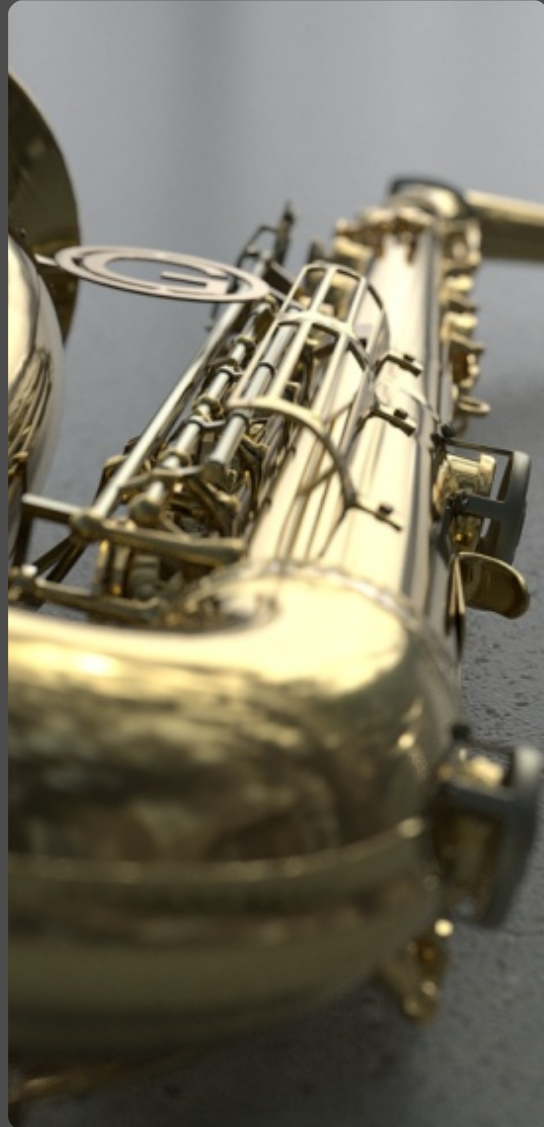
Ability to let the renderer decide for the direct lighting evaluation making a best balanced evaluation. This is ideal when there are a lot of lights in the scene.

## FIELD MAPPING



Image by Jenu Jacob

## DEPTH OF FIELD



*Image by Peter Stoppel*

## PRESETS & EASY TUNING

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Thea biased engine enables the user to create presets that work in almost all cases without further tweaking. This way the time to tune the biased engine is minimized and new users can get robust results right from the beginning. Using perceptual criteria the engine adapts better to the local scene difficulties and settings are simpler than ever!

## NO MORE THICK WALLS

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The issue of shadow and light leaks has been a perpetual problem with biased render engines, especially the ones using techniques like Photon Mapping. This is for example the case where light or shadow from one side of a wall appears on the other side as well showing an unnatural effect. Field Mapping makes an accurate evaluation and leaks that are so common with Photon Mapping, are not present.

## SHADOW CATCHER & BUMP

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The shadow catcher enables a model to be naturally embedded inside a photograph showing its shadow from the environmental lighting and is supported by Adaptive BSD engine. Furthermore, the bump and normal mapping under global illumination give a realistic look to bumped surfaces when indirectly lit. This is done without any performance decrease.

## WALKTHROUGH ANIMATION

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With our specific implementation for walkthrough animations the Adaptive BSD engine gives a flicker-free animation without any floating "blotchy" patterns. This is because global illumination solution is calculated for the whole sequence and reused afterwards for rendering all the frames.

## VOLUMETRIC SCATTERING

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Volumetrics are supported by the biased engine by evaluation of single bounce scattering only.

## FIXED SPECTRAL RESOLUTION

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Renders are resolved in a color space that is far more accurate than simple tristimulus (RGB) color space by using a fixed set of computed wavelengths.

## BUCKET RENDERING

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Progress is made by separating image into tiles and rendering them without having to deal with the whole image at once.

## BLURRED REFLECTIONS

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Glossy reflections and refractions are evaluated through means of ray tracing resulting in accurate blurred evaluation.

## SUB-SURFACE SCATTERING

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An approximation is used for the biased calculation of this element, resulting in a fast and pleasing SSS appearance.

# PRESTO ENGINE

Thea Presto is an advanced render engine that has been written from the ground up and is optimised for both GPU (Nvidia® CUDA®) and CPU execution simultaneously, harvesting all your computing power. The engine has been especially tuned for fast interactive rendering. This pushes GPU+CPU computing to the limits while keeping the high photorealistic quality of Thea Render. Take a Tour and see benchmarks for Presto at [www.theapresto.com](http://www.theapresto.com)

## GPU + CPU

Presto is now running on both GPU and CPU simultaneously, harvesting all your computer raw power. For coding Presto on the CPU, we didn't want just a "port" of the code from Nvidia CUDA architecture to x86/CPU architecture. We wanted to squeeze the CPUs to the max and see a real performance comparison between GPUs and CPUs. For this, we decided to adapt Intel's Embree library. What does this mean? with every GPU and CPU core running Presto, it means fast, very fast, rendering. And this fast rendering is coupled with Thea's material/light system. All in all, pure quality in the shortest render times! Download Presto Benchmark

## INSTANCING & VOLUMETRICS SUPPORT

Presto has full instancing support. Along with various memory improvements, millions of instanced polygons can be easily rendered. Presto can handle all the geometric complexity one wants. Additionally, subsurface scattering and volumetrics are supported by Presto and they are also delivered fast, truly realistic, without any approximations.

## FAST INTERACTIVE RENDERING

One thing that is impressive about Presto is the interactiveness rate that one can achieve. It is certainly the most fun engine to work interactively with and its response is great particularly in the case you have a separate graphic card for display.

## TWO RENDER MODES

Presto comes with two different render modes. One for very fast preview which also uses ambient occlusion and accounts mostly for direct lighting. And a second one which offers truly photorealistic, unbiased-like mode. They both are progressive render modes and can be used for rendering inside the Viewport and the Darkroom.

## IDEAL FOR ANIMATION

Presto can be used for rendering complex animations in a fraction of time compared to others. Adding also the new network render mode, which allows to render frames separately on each node, one can render complete product and exterior animations always in time.

## DISPERSION

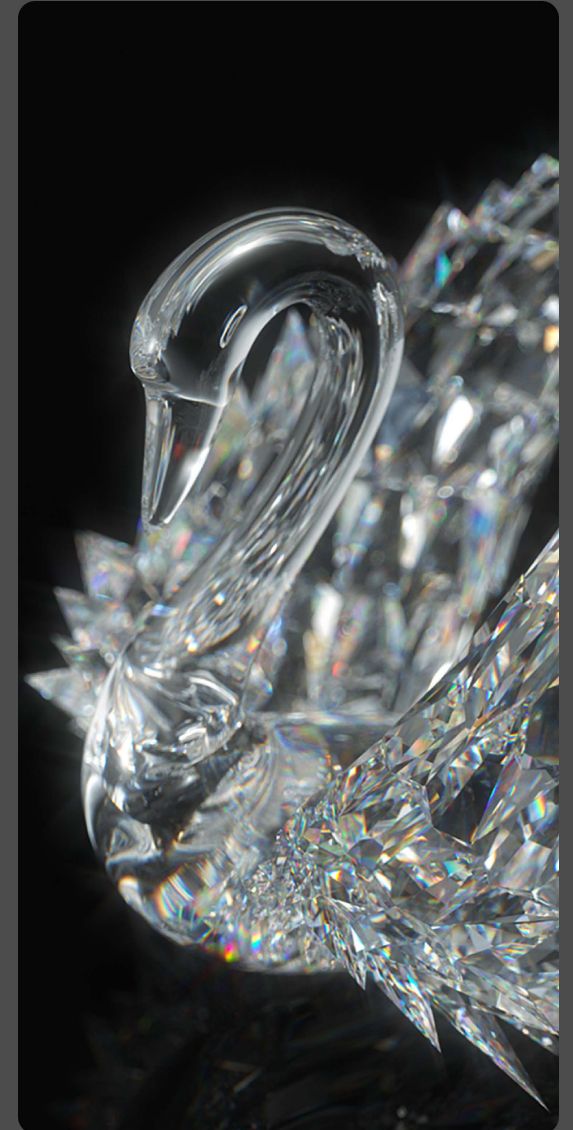


Image by Patrick Nieborg

## MOTION BLUR



Image by Patrick Nieborg

# GENERAL RENDER FEATURES

Thea Render engines support many advanced rendering features. For a detailed table of supported features per engine (for current version) please visit [the corresponding page](#).

## EASY PRESET SUPPORT

Quickly test your renders using drop-down render presets.

## LINEAR WORKFLOW

Reverse gamma correction is applied automatically and transparently keeping the texture colors in the correct scale for the lighting simulation.

## TRUE MOTION BLUR

Motion blur is evaluated by ray tracing resulting in accurate blur. It is exact with the blur computed based on camera shutter speed and object movement.

## TRUE DEPTH OF FIELD

Depth of field is evaluated by ray tracing resulting in accurate blur. It is computed based on camera thin lens geometry and other characteristics.

## INSTANCING

Surface proxies exist that can be used saving memory from replicating geometry. In addition, model proxies can be used for optimised memory footprint, by instancing of the same model in different positions. This is taken into advantage by the integrated instancing brush.

## RENDER CHANNELS

Normal, Depth, Alpha, Object Id and Material Id channels are supported by biased and unbiased engines. In addition, Direct, Global Illumination, Sub-Surface Scattering, Reflection, Refraction and Transparency channels are supported by biased engine.

## MULTI-PROCESSING

All CPUs, all CPU cores and CPU Hyperthreading are supported.

## MULTI-PLATFORM 32/64-BIT\*

All major operating systems are supported (Windows XP/Vista/7/8+, Linux, MacOSX Leopard/Snow Leopard/Lion/Mountain Lion/Mavericks+).

\* 64 bit currently for Windows only.

# MATERIALS

In Thea Render, we have created a compact number of highly realistic materials using the most accurate physically-based models. These models are designed to produce highly energy-conservative material combinations. You can render quick, high quality biased animations or astonishing unbiased stills. If you prefer you can render astonishingly realistic unbiased animations and quick high quality stills. The physically based material system with features such as advanced layering system and spectral color picker are the heart of the render engine. These features allow realistic and convincing renders.

## BREAKTHROUGH LAYERING SYSTEM

### Strictly Physically-based Models

All material models used are physically-based with visual cues that match reality better than other render solutions.

### Multiple Coating/Mixing/Stacking

Materials can be layered in three different modes, giving infinite combination possibilities.

### High Energy Conservation

The materials and layer system itself is highly energy conservative, meaning that accurate representations can be achieved without excessive use of multiple layers and weights as seen in other render solutions.

## SPECTRAL COLOR PICKER

Thea Render offers a spectral color picker which is more robust than the RGB one and helps you produce realistic renders.

## ANISOTROPY

Glossy and coating materials can make use of anisotropy which is a visual cue present in many materials in nature (particularly in metals).

## DISPERSION

This phenomenon is rendered out of the box using glossy materials. Dispersion is defined using Abbe number or by making use of sample data.

## MICRO ROUGHNESS

Micro Roughness is a phenomenon that increases the apparent reflection sharpness, as the viewing angle goes from normal to shallow. Thea Render supports this feature and gives control over two parameters indicating the micro structure of the surface, the average width and height of the micro anomalies on the surface.

## PHYSICALLY-BASED MATERIALS



Image by Massimo Siracusa

## MICRO-DISPLACEMENT



Image by Grzegorz Rakoczy

## DISPLACEMENT MAPPING

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Textures can be used to increase visual geometric complexity through means of displacement mapping. Micro-displacement subdivision-based approach is invoked on the fly, minimizing memory demands.

## BUMP MAPPING

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Bump mapping is defined on per-layer basis so that multiple bumps can be defined in a single material.

## NORMAL MAPPING

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Normal mapping is an enriched form of bump mapping is defined on per-layer basis so that multiple bumps can be defined in a single material.

## CLIP MAPPING

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With clip mapping, cuts can be made on objects with the use of textures avoiding explicit modeling work.

## ALPHA MAPPING

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Alpha mapping is a variant of clip mapping, where textures describe the opaqueness of a surface, rendering see-through objects easily.

## IOR SAMPLE DATA SUPPORT

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Measured data can be used for enhancement of material appearance. These particular data describe the wavelength dependence of index of refraction for glossy materials.

## SUB-SURFACE SCATTERING

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A special model describing sub-surface scattering is present, packing all surface and medium parameters for ease of use.

## PARTICIPATING MEDIA

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Isotropic, Mie Variants, Rayleigh and Henyey-Greenstein phase functions are supported. Homogeneous and heterogeneous media (based on procedural textures) are supported.

# LIGHTING

By selecting and improving the most robust numerical techniques we have established an efficient framework for Thea Render. This allows us to accurately simulate volumetric light. Since we calculate full visible spectral space there is no lighting detail missed.

## PHYSICALLY-BASED SUN/SKY

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Sun and sky have a physically-based spectral description.

## IMAGE-BASED LIGHTING

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Images can be used as lighting sources, either as bitmaps for objects or the sky. Four modes of special mapping are available that enhance visual cues of the renders; Illumination, Reflection, Refraction and Background mapping.

## PHOTOMETRIC ANALYSIS

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Luminance and illuminance properties of a scene are two key factors in lighting design; they describe the energy arriving to our eyes and space correspondingly, but in the way we, humans, perceive and interpret lighting. These properties can be computed out-of-the-box and in parallel with the rendering process. Besides cool false-color rendering a user can select multiple regions of interest where he can analyze the extreme points and distribution of values and generate a full report, that can be viewed in any web browser.

## POINT LIGHTS

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Point lights are a special kind of lights that exist for the user convenience of defining easily additional light sources. Omni, Spot and Projector are the variants of point lights supported.

## IES SUPPORT

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Industry standard format description of luminaire measured data. This format describes the goniometric distribution of light source power and it is supported for both point and area lights.

## AREA LIGHTS

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Any object of arbitrary can become an emitter by simply changing its material properties.

## PHYSICALLY-BASED SUN/SKY

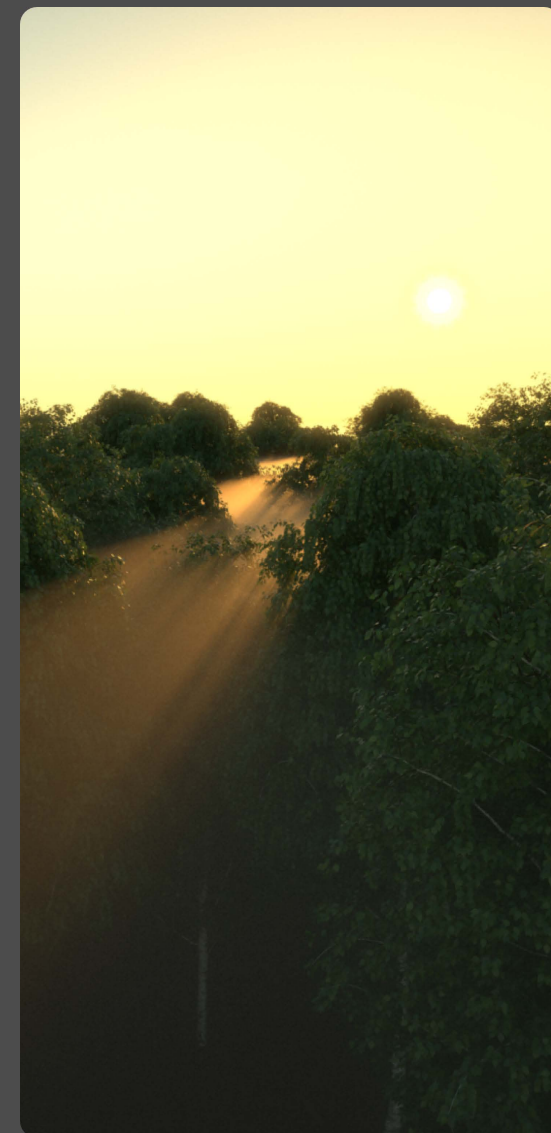


Image by Patrick Nieborg

## MEASURED IOR DATA



Image by Patrick Nieborg

# TEXTURES

With the use of the dedicated Texture Editor, you can combine up to nine textures at the same level (and even more by using secondary level) for designing fast infinite texture variations.

## CONSTANT COLOR

Constant colors can be defined in RGB tristimulus space, full spectrum or corresponding to given blackbody temperature.

## BITMAPS

All common image formats are supported (jpg, png, tif, bmp and many more). Additionally the high dynamic range formats HDR and OpenEXR are supported.

## TONE MAPPING

Special image operations such as color clamping, gamma, saturation, contrast and others can be applied on textures as a way to increase potential use with altered appearance without increasing memory demands. This is due to the fact that operations are applied during rendering (on the fly).

## PROCEDURALS

Perlin noise based and various other procedurals are supported. Anisotropy patterns are integrated as procedurals for ease of use.

## ADVANCED OPERATIONS

Textures can be combined in various ways, giving infinite creation possibilities. The combination may be one of blending, multiplication, synthesis or inversion.

# CAMERA

## MODELS

Thin-lens cameras are supported as well as pinhole ones. The latter case is ideal but it is handy when depth of field is not wanted.

## PROJECTION

Perspective, parallel, spherical and cylindrical are supported.

## Z CLIPPING

With camera Z Clipping, near and far planes cut the space giving the possibility to peak inside the models.

## AUTO-FOCUS

Cameras can make use of auto-focus to easily setup objects that are sharp in the render.

## SHIFT LENS

The lens can be shifted in order to avoid perspective distortion of shifted objects.

# NETWORK RENDERING

## EASY SETUP

Setting up network rendering for a local area network is easy using the integrated server search tool. Clients are working transparently to the user, making a render farm deployment easy and fast.

## CO-OPERATIVE SINGLE FRAME

Multiple machines can work co-operatively on the same frame in unbiased mode.

## CROSS-PLATFORM

Machines of different characteristics and operating system can be used.

## NETWORK LOG

Monitor network status of each machine with integrated log on server user interface.

## CO-OPERATIVE ANIMATION

Animation sequence can be rendered in a bucket fashion, with each machine rendering a different frame. Irradiance cache can be merged prior to actual rendering to suppress any interpolation errors (biased engine related).

## EASY NETWORK SETUP

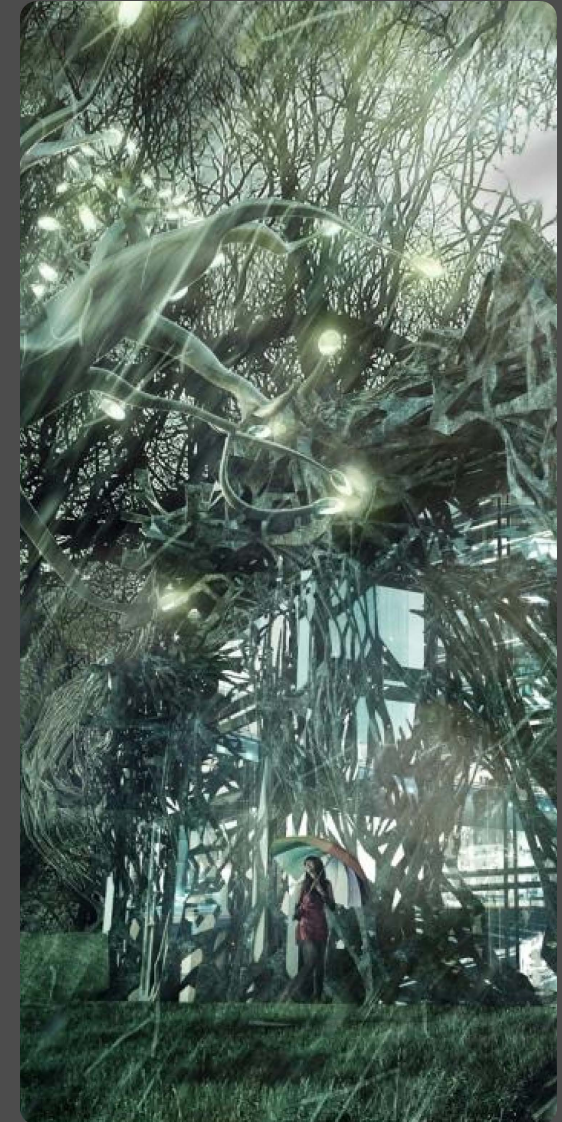


Image by Marc Gibson

## ALL-IN-ONE STUDIO



Image by Patrick Nieborg / Model by Tim Ellis

# USER INTERFACE

Thea Render Studio is our love product offering which right from the start pays great attention into a non-modal and ergonomic design that is at the same time aesthetically superior.

## ALL-IN-ONE STUDIO

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### Modal Design

Everything has been carefully designed and everything has its place. No overlapping, no floating windows and only a few non-modal maintaining high workflow.

### Aesthetic Design

Special attention has been given to deliver a modern and pleasing interface.

### Polymorphic Interface

The interface is dynamically set according to running mode. No extra tools are present to break workflow, the user has to learn only one application.

### Drag and Drop

Easy setup by means of drag and drop support.

### Theme Support

The whole user interface can accept "skins" by means of user defined icons and full theme support in the OpenGL viewport.

### Internationalisation

Multiple languages are supported and can be easily added without the need to recompile the application.

### Alignment/Basic Modeling

Alignment tools and basic modeling operations such as smoothing, welding and transformations are being supported.

### Coordinates Panel

Numerical panel for object coordinates is supported for exact object placement.

### Animation Editor

Object rigid animation can be defined using the integrated key frame based editor.

### Interactive Render

A render preview window is integrated in the viewport for interactive rendering of any changes.

### Instancing Brush

This is a special staging mode, where user can "spray" instances on selected objects and take advantage of renderer instancing capabilities without the need of setting up instancing from modeling application.

### Hierarchy Window

Navigate easily inside groups and nested groups with the use of Hierarchy window.

### Tight Integration

The material editor has been designed to match exactly Thea materials and layer system. This means that the material setup is optimal.

### Various Preview Scenes

The application comes with predefined material preview scenes and they can also be enhanced further by the user.

### Symbolic Preview

Material editor comes with a special innovative preview called layer schema that shows symbolically how layers are setup along with the lighting transfer.

### Secondary Material Editor

Additional editor window exists for easy comparison between materials.

### INSTANCING BRUSH



Image by Patrick Nieborg

## VOLUMETRIC & DISPERSION



Image by Patrick Nieborg

## TEXTURE EDITOR

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### Tight Integration

Full support of colors, bitmaps and procedurals.

### Fast Texture Combinations

Designed with easy and fast setup in mind, which in most cases involves combining two or three textures. Up to nine textures can be combined at the same level and more by using secondary level.

## COLOR EDITOR

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### Innovative Design

Advanced editor with spectrum editor, HSV color picker and blackbody temperature picker all-in-one.

### Color Preview under Custom Illuminants

Selected color can be also previewed under special illuminants at the same time, another innovative feature. The preview illuminants can also be customized based on user needs.

### Palette Handling

Colors can be stored and retrieved from user palettes.

## RELIGHT EDITOR

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Full relight editor with animation capabilities completing the Relight unbiased feature.

## DISPLAY

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### Camera Settings

ISO, f-number and shutter speed are integrated on display for exposure setup. These controls stay independent of camera related settings for easier handling (DOF/Exposure decomposition).

### Sharpness

For renders using supersampling, additional filter is invoked during the downsampling process with a varying blurring/sharpness parameter.

### Deburn

This feature enables the prevention of color saturation and compresses effectively the high dynamic range of the render into a low dynamic range image format.

### Additional Filters

Other filters like bloom and vignetting can be invoked as post-process for simulating corresponding camera phenomena and making renders appearing more realistic.

### Color Balance

Color or white balance is supported by balancing render based on given temperature of dominant blackbody-like emitter.

# COLIMO SUPPORT

Thea Render comes with a great feature: integration with Motiva Colimo application. Motiva COLIMO is a realtime post-production tool that allows the user to change materials instantly on pre-rendered images, taking into account physical accurate reflections, refractions and GI bleeding. This means that it is now possible to edit the materials in real time as a post-process.

## UNIQUE FEATURES

Thea Render can calculate extra information needed for user selected materials during the course of a single render. The additional channels computed are exported as a single Colimo project with high quality of the original render being preserved. Using Colimo the color and texture of the pre-selected materials can be changed in real-time.

# INPUT/OUTPUT

## MODULAR ARCHITECTURE

Superior software architecture, fully modular and extensible. Software development kit exists for user defined procedural textures.

## IMPORT FORMATS

3DS/OBJ formats are supported for import.

## INTEGRATION WITH MODELERS

3DS/OBJ formats are supported for import.

## SOFTWARE DEVELOPMENT KIT (SDK)

Exporter SDK is available for fast exporter plugin development (full integration SDK is also available).

## SCENE DESCRIPTION

Use of native XML and binary format for scene description.

## SUB-SURFACE SCATTERING



Image by Patrick Nieborg

## THEA FOR 3DSMAX



Image by Motiva Infografia

# THEA FOR 3DSMAX

Thea for 3dsMax incorporates all the capabilities of Thea Render inside 3D Studio and adopts an easy workflow for the user. This makes the process of switching to the new render engine nearly effortless.

## INTEGRATION INSIDE 3DSMAX

All Thea functionality gets fully integrated into 3dsMax through this plug-in as a new render engine. All capabilities of Thea material system are available, while access to Thea Material editor is kept for user convenience. All lights types, render configuration settings, darkroom or render channels can be created or configured inside host application.

## MATERIAL CONVERTER

This utility makes easier for the user to change the render engine in a finished scene to Thea Render. It is compatible with several render engines and can convert also lights and cameras in most cases. In case of animated lights or cameras, animation keys are also copied to new cameras or lights. Procedural textures included in 3ds Max can be rendered and assigned as images in an automated way.

## SUPPORT OF ADVANCED FEATURES

All types of geometry are supported, including deformable meshes, geometric modifiers, renderable splines, compound objects or particle flow systems. Animation is also supported, as well as instances and external references. Render jobs can be sent through backburner without special considerations.

## INTERACTIVE RENDER

The fully integrated interactive render (IR) engine can be used as floating window or as an extended viewport. Any changes on materials, lights or cameras are reflected instantly on the IR viewport. Geometry changes and object creation and deletion are considered as well. IR can be used to preview exposure, DOF or any tonemap settings applied from darkroom tab.

## ADDITIONAL TOOLS AND PROXIES

Thea for 3dsmax includes a proxy system that handles external Thea models. These models can be generated inside 3dsmax and used afterwards rendering easily high complexity scenes. The plugin also adds direct support for Forest Pack scatter system (by Itoosoft). A Thea Random Material has been included to add more variations on replicated objects. Several tools have been also included to improve the user experience and workflow such as a material converter and a light catalogue for Thea lights and a resource collector.

# THEA FOR BLENDER

Thea Render is a high quality external rendering solution that can be integrated into Blender. Features such as interactive rendering, materials editing, instancing support make it possible to work inside Blender creating stunning results with a smooth workflow between Blender and Thea Render. In addition the plugin has been released under GPL (open source) that we believe fits the spirit of Blender development itself.

## INTERACTIVE RENDER

With the use of the interactive render mode you are able to preview the Blender scene, with its materials and lighting, interactively. You are able to see the rendered scene inside the 3D View or at the UV/Image Editor and see your changes being applied directly.

## MATERIAL LAB

Add Thea materials to your Blender materials either from inside Blender or with the help of Thea Material lab pop-up window. Increase your scene realism by adding high quality materials with layers, displacement, light emittance and any other option that Thea Material Lab provides.

## INSTANCING SUPPORT

All clone objects in Blender made either with Alt +d command or by using object particles they will be exported to Thea as instances, allowing easier rendering of heavy geometry.

## OPEN SOURCE

Blender plugin is now released under GPL open source license. In the archive that is downloaded you will find the Python source code that integrates Thea on Blender. We believe that the open source license of the plugin makes the integration as tight as possible and fits perfectly the spirit of Blender development itself.

## EXPORT TO STUDIO

Thea for Blender makes it possible for the end user to export the scene to Thea Studio and take advantage of additional staging tools. All your material, camera, environment and lighting settings made inside Blender will be then available in Thea Studio for further enhancements and full control over rendering.

## THEA FOR BLENDER



Image by Sean Smylie

## THEA FOR CINEMA4D



Image by Zoran Gorski

# THEA FOR CINEMA4D

Thea for Cinema4D is the perfect companion for Cinema4D users who want photorealistic rendering inside their modeling application. Currently in beta phase, the plugin offers a list of advanced tools while being actively developed to meet the most demanding visualization requirements.

## INTERACTIVE RENDER

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While Thea Render supports interactive render region in Cinema4D, it goes one step further with its own integrated darkroom, reacting much faster to user workflow. Camera and material changes are optimized so as to provide optimal interactive experience.

## MATERIAL LAB & LIBRARIES

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Thea for Cinema4D offers a number of ways to add Thea Materials to your scene. You can create a new Thea material and edit it inside Cinema4D or you can open Thea Material Lab for enhanced visually material editing. Our high quality material libraries are ready to use and just a drag-and-drop away from the content browser to your models.

## INSTANCING SUPPORT

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Our plugin supports all instancing methods provided by Cinema4D matching the native renderer. Whether you are using MoGraph cloners, arrays or render instances the result will always be as it should be.

## ANIMATION

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Thea Render can handle animation rendering inside Cinema4D and render all the frames out of the box. Furthermore, by supporting Team Render (R15 only) one can distribute these frames over the network f(or ultra fast animation sequence rendering).

## TEXTURE BAKING

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With the automated texture baking, Thea Render is able to tackle all Cinema4D native shaders and execute with the highest performance. This is done by preparing all necessary bitmaps in advance of the rendering process. This way complete scene export as well as network rendering can also be used when native shaders are involved.

## EXPORT TO STUDIO

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While the integrated plugin will suffice in most cases, it also comes bundled with our Thea Studio. This is ideal for further scene staging and material/lighting tweaking.

# THEA FOR SKETCHUP

Thea for SketchUp combines our powerful rendering engines with the efficient simplicity of SketchUp. Having biased, unbiased and interactive render modes (including GPU support) within SketchUp is a joyful experience. The plugin lets you enrich your models with highly detailed three dimensional content, breaking old limitations related to handled model complexity.

## INTERACTIVE RENDER

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The interactive render mode allows you to preview the composition, materials and lights in your scene interactively. It is a valuable help in the workflow, which gives you an immediate visualization of the environment, depth of field, reflections, light distribution, material properties and external Thea models in a scene.

## MATERIALS

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Thea for SketchUp lets you benefit from our powerful Thea Material Editor which supports all kinds of layering, tone-mapping, displacement, light emittance and procedural textures. Additionally, Thea libraries can be found inside SketchUp Paint Bucket (in SketchUp Material format) for applying Thea materials easily and directly! With the "Convert Thea Material(s) to SKM" tool, you can also convert your own libraries. Licensed users can download additional libraries in both Thea format and SketchUp materials format. Moreover, you can choose one of the available Thea material presets (they also come with useful parameters that let you adjust their properties). All materials can be also found inside the Content Browser for easy import inside SketchUp scene.

## EXTERNAL MODELS - PROXIES

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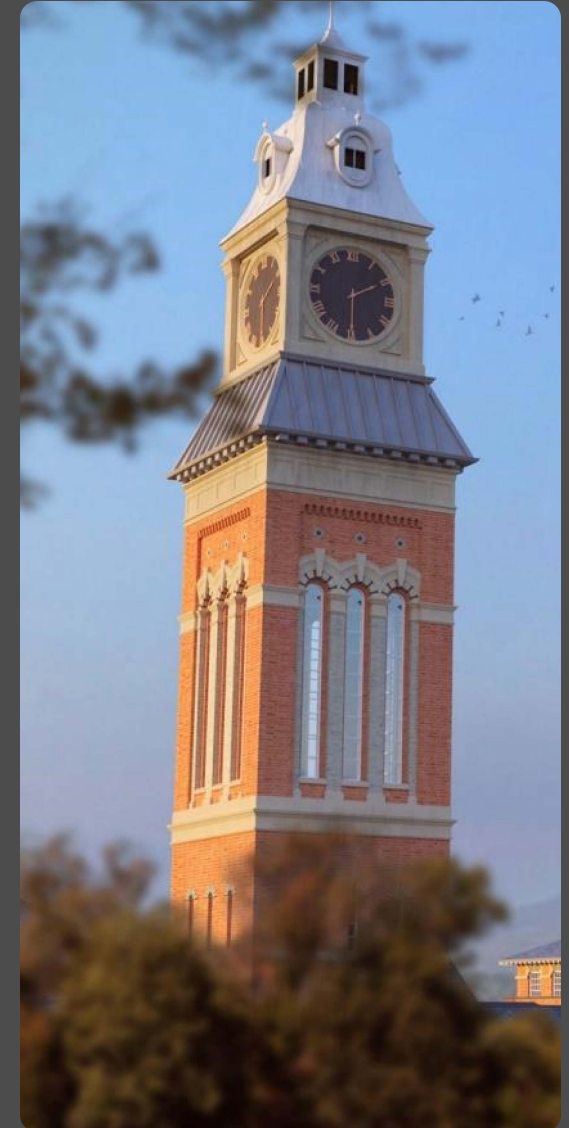
Thea for SketchUp provides a solution that overcomes limitations in terms of complexity of the final model. High quality external Thea models can be inserted as an empty wireframe box. In a rendered image, they will be translated into very detailed originals. This allows an easy population of your model with impressively looking trees, grass, cars and detailed furniture. There are already a few libraries of render ready objects.

## ANIMATION

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Thea for SketchUp is able to render animation as it is visible in a SketchUp view. This means that it supports all animation plugins that show their output directly in SketchUp window (built-in scene animation).

## THEA FOR SKETCHUP



*Image by David and James Hennessy*

## THEA FOR SKETCHUP



Image by Massimo Siracusa

## PANORAMIC IMAGES

Thea for SketchUp allows you to render a model using a camera with spherical projection. The resulting image will be a panorama that can be viewed by an external program or a web application. It is especially valuable for presenting interiors to clients and gives an excellent impression of a proposed solution.

## CONTENT BROWSER

This utility makes it easy for the user to browse Thea material libraries, models, skies and proxies. The user is then able to import them directly inside SketchUp scene.

## EXPORT TO STUDIO

Thea for SketchUp makes it possible for user to export the scene to Thea Standalone Studio and take advantage of additional staging tools. Using the 64-bit Studio (currently available on Windows / Linux), one can render heavy scenery in very high resolutions without RAM limitation.

## RENDER CHANNELS

Many SketchUp users possess exceptional post-processing skills. Thea for SketchUp allows rendering a model with multiple images containing separate channels, commonly referred as "passes". Those channels may include, for example, shadow, depth, direct light, transparency and reflection information. Combining them in an artistic way gives full control over the final image and lets you create otherwise-hard-to-achieve effects.

## ADDITIONAL TOOLS - FEATURES

Thea for SketchUp main features include among others the following:

- Point Lights (Omni/Spot/IES)
- Area & Environmental Lighting
- Advanced Camera Settings
- Darkroom with Multiple Controls and Render Channels
- Cross-Platform (MS Windows / Mac OSX)
- Saving Thea Settings with SketchUp Scenes
- Export of SketchUp Scene (or part of the scene) to Thea Studio
- Content Browser
- Material Convertor
- Thea models creation from inside SketchUp