

# What's new in CAD Decor PRO 3.0

## NEW VISUALIZATION LOOK

The visualization interface has changed. It is now more user-friendly and transparent. Instead of three toolbars (the top iconic menu, the left panel with "Materials", "Scene" and "Render" tabs and the bottom bar with tile previews and functions), there are now four function groups. We describe them below.

### The top menu has remained almost unchanged - with two exceptions:

- a new "Documentation" icon has been added, which opens **a new Documentation module that creates a personalized and comprehensive technical design documentation**;
- another new icon "Quick save" allows you to save images (standard, stereoscopic or anaglyph) and 3DE Presentations on the disk without selecting the location, format or resolution of files (because they save accordingly to the last settings made in the "Save visualization" window that is opened by the "Export 3D scenes" icon).

### There are five new tabs available now in the left panel:

- "Materials" – here you will find: a Paint Module (giving access to the Tikkurila's and Sigma Coatings' product offers), a list of texture databases by manufacturers of furniture boards and fronts, kitchens worktops and others, as well as the library of universal (standard) testure databases by CAD Projekt K&A with the ability of uploading any numer of user's own textures;
- "Tiles" – a list of databases for wall and floor linings and decorations from various manufacturers;
- "Lights" – a list of light sources in the design: halogens, fluorescent lamps, spotlight and sunlight as well as luminous objects, i.e. emitters (objects attributed with a property of a real light emission) and glowing objects (attributed with a property of glow, which is a simulation of an intense light);
- "Render" – rendering options and photographic filters; in the Render PRO module there are **Radiosity** and **Ray tracing** algorithms available, as well as a completely **new Path tracing method**;
- "Presentation" – a panel for recording AVI videos (in 2D or 3D), also offering **the ability to record 360° animations** (videos recorded in a **Spherical panorama** mode to be posted on Facebook) and creating VR presentations, displayed by our VR file browser: **obserVer**.

### A new right panel has appeared, which includes edition functions:

- after selecting the material (by marking the object in the scene), its properties can be changed in the scene - in the "Material properties" tab;
- after left-clicking on the light source on the list in the left side menu, you can control its parameters in the "Light properties" panel;
- there is one more tab here: "Scene settings", where you can manage camera and scene settings, and also save a list of selected views with different resolutions to be used during rendering (while using the **Path tracing** algorithm you can choose any number of these views to be rendered and obtain illustrations with various resolutions and settings, spending the time needed to perform calculations on other activities).



**The bottom menu:**

- it displays - as it has been so far - previews of tiles and the functions of their application and edition, as well as a summary of used linings;
- also previews of materials from the currently selected collection are presented here (analogously to the previews of tiles), what improved their visibility (they can be easily managed f. e. by changing their size, and after pointing the cursor on the item on the list, its enlarged preview will appear in the bottom left corner of the scene viewer).
- after switching to the **"Render"** tab in the left side menu saved images of the rendered scene and a preview of **Path tracing** calculations will be displayed here.

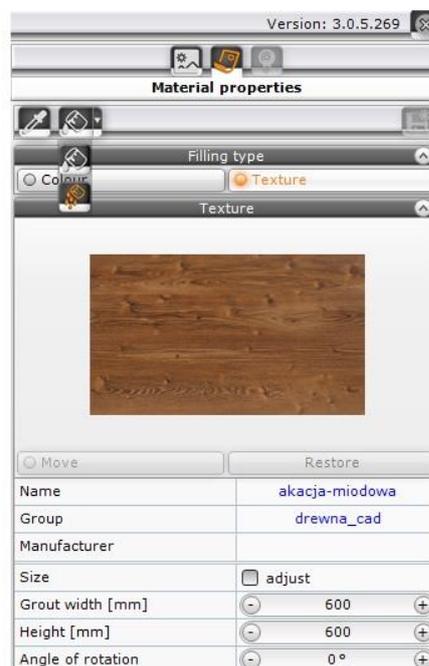
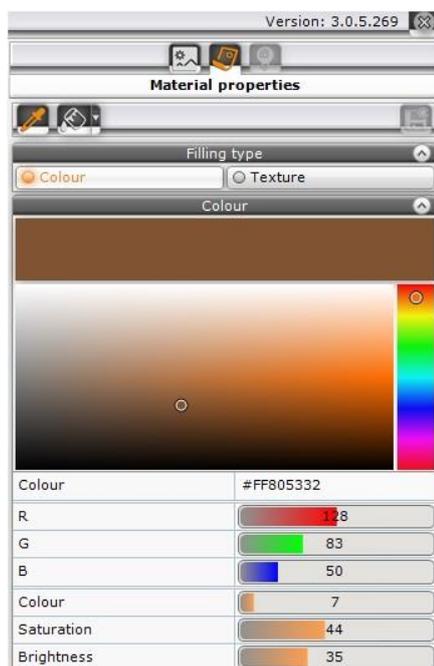
Visibility of the four groups of functions, described above, can be easily and conveniently controlled - after right-clicking on the top bar, a small context-menu will open in which you can hide side and bottom panels or restore their default view. These three panels can also be expanded and narrowed using the mouse.

## NEW WAYS OF MANAGING MATERIALS

**CAD Decor PRO in version 3.0** offers easy application of textures and colours already used in the scene to other objects, without time-consuming browsing of databases in a tedious search for a particular texture or looking for an identical shade on the palette. **Thanks to the "Eyedropper" and "Bucket" tools the appearance of all elements interior design can be unified in a few moments!**

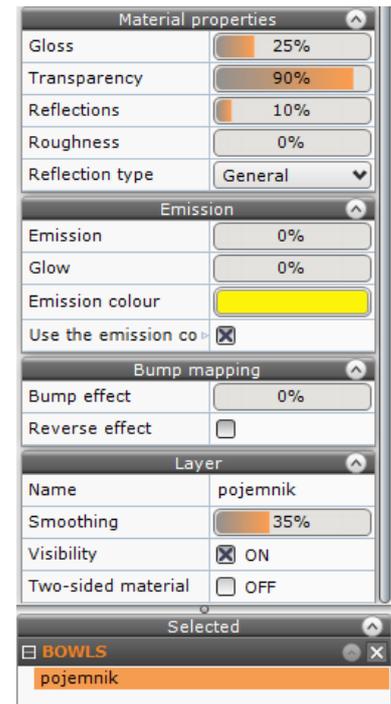
**"Eyedropper tool"** allows to lift (sample) a texture or colour from the indicated pixels along with previously attributed properties! The lifted material can be edited in the right panel or immediately used in the scene. Its' properties, such as gloss, transparency, reflections, roughness, emission, glow or bump mapping, are automatically assigned to objects on which the sampled material is applied.

**"Bucket tool - applying materials to objects"** and **"Bucket tool - applying materials to layers"** allows you to apply sampled texture or colour to other objects or surfaces (individually or to all objects assigned to a particular layer at the same time).



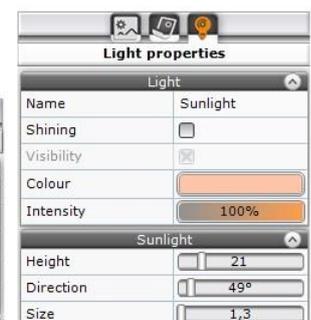
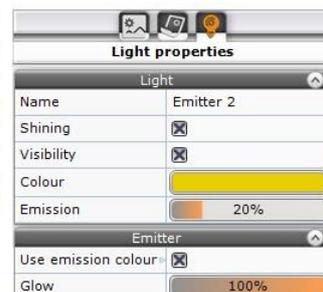
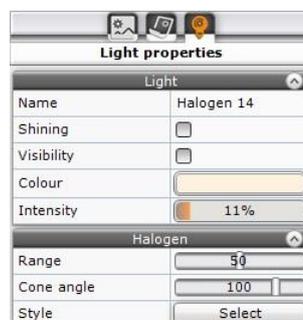
After selecting an object you can edit its properties in the right side menu. A new feature is the ability to edit surfaces (i.e. walls, platforms) for which no texture has been applied yet. You can move the texture, rotate it or change its size... You can attribute textures with such parameters as: **gloss**, **transparency**, **reflections** (general or planar: vertical or horizontal), **roughness** (which is vital for the natural appearance of light reflected by various surfaces, such as ceramic tiles, wooden worktops or floors), as well as light **emission** and **glow** (i.e. imitation of the intense light, which, however, does not affect the lighting distribution in the scene) and the **bump mapping** effect.

It is also possible to manage a particular layer of an edited object (i.e. one that is difficult to indicate with the mouse, because other layer covers it) - the list of layers is available at the bottom of the right side menu. You can control their smoothing (the level of smoothness of rounded surfaces) and visibility or define whether the material should be two-sided to improve the distribution of light in the scene (this may be especially useful in case of some window blinds or other models made of single surfaces).



## NEW WAYS OF MANAGING LIGHT

- Lists of light sources on a separate "**Lights**" tab in the left side menu – for **greater convenience and clarity!**
- **Easier management of light sources** - the ability to create groups of lights with any name;
- Easy transfer of lights between groups using the "drag-and-drop" method or function available under the right mouse button;
- You select light sources on the list in the left menu and modify their properties in the right menu;
- **Quick preview and edition of luminous objects**, that is, objects and surfaces with attributed emission (emitting real light to the environment) and glow (imitating intense glow, but not having any influence on the light distribution in the scene).



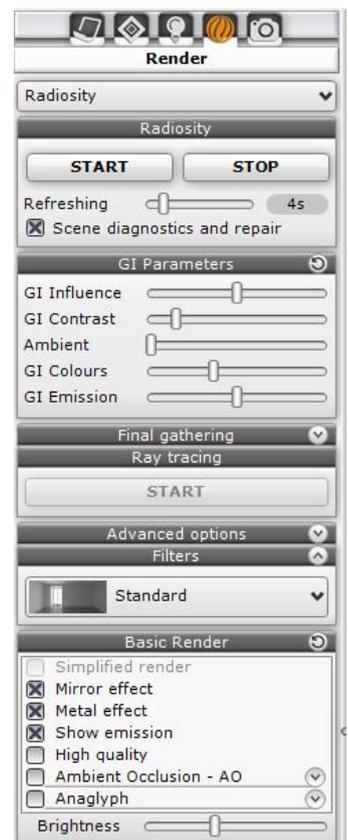
## NEW RENDERING ALGORITHMS

Currently **there are two algorithms available for calculating the global illumination in the scene: Radiosity**, which has been already known to users of our programs, and **a completely new Path tracing algorithm**, which analyzes how much light reaches every single pixel in the scene (analyzing the paths of the rays).

- **Path tracing** is more precise than **Radiosity** and can provide results indistinguishable from real photographs;
- **it may use many graphics cards** at the same time to render a single view;
- in addition to calculating global illumination, **Path tracing** also analyzes reflections and refractions of rays (i.e. light distribution on metal and mirror elements or glass) in a similar way to the **Ray tracing** method, which is used to enhance the results of the **Radiosity** algorithm;
- **while working with Path tracing you are able to modify the materials parameters** (such as reflections, gloss etc.) during the computations – and the results will be visible within seconds on the preview;
- in the **Path tracing** option panel **you can easily create the 360° presentations** that can be published on Facebook – using the **"Spherical panorama"** function;
- during rendering using the **Path tracing** algorithm, the preview of the currently analyzed image is visible, as well as previews of completed renderings, stored on the disk in the indicated folder;
- **we introduced new photographic filters for Path tracing** to help you find those, that reflect the character of your designs the most accurately (the **"Filters"** tab is available for both **Radiosity** and **Path tracing**);
- the mechanism used by **the Path Tracing algorithm allows to handle bigger designs** than the **Radiosity** algorithm (i.e. containing a greater number of surfaces);
- we have also provided **many new colour tones for Path tracing**, to make it even easier for you to choose the right filter that best reflects the character of the designed interior (the **"Filters"** tab is available for both **Radiosity** and **Path tracing**, but in case of **Radiosity** it contains less items).

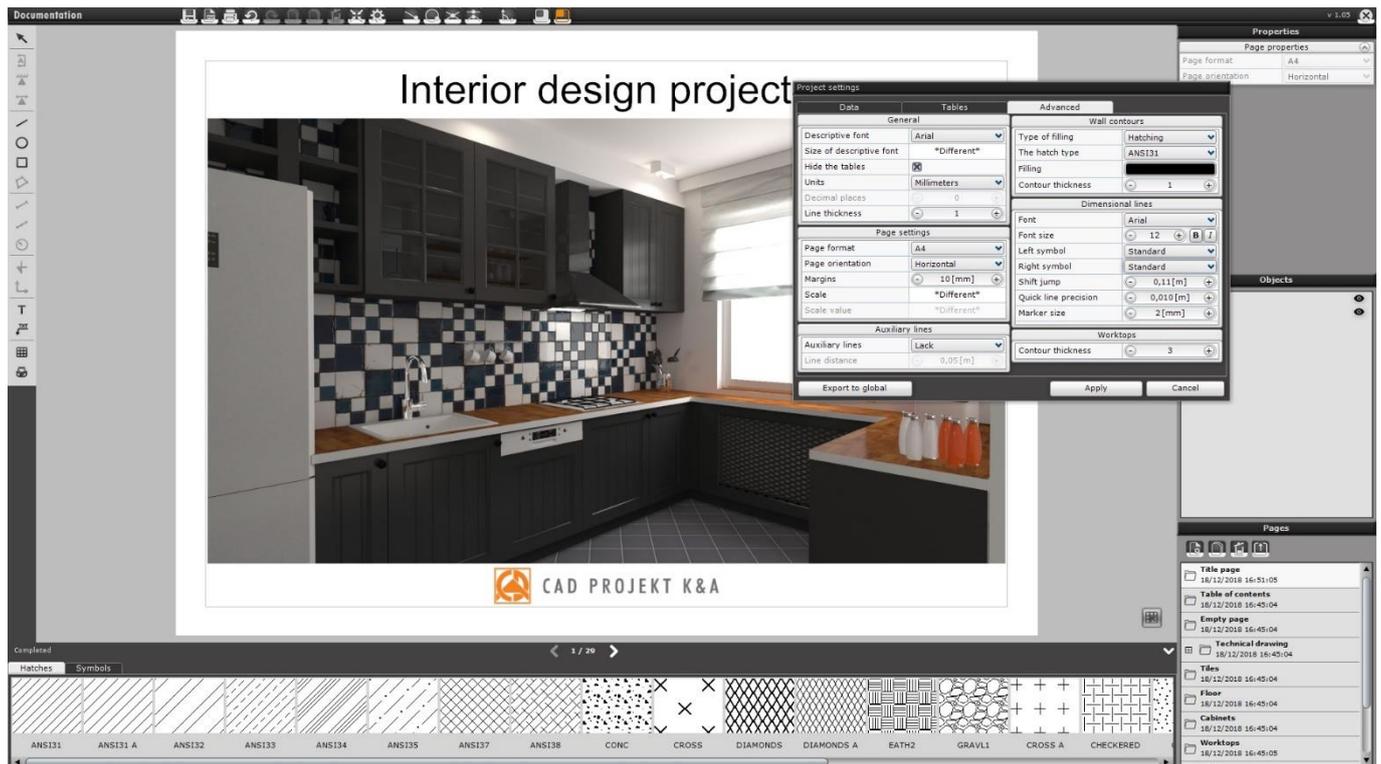
## OTHER CHANGES IN VISUALIZATION

- scene settings: **"Statistics"** and light distribution data: **"Style"** (IES for halogen lights) have been moved from left side menu to the right one;
- the **"Bump mapping"** feature has been moved from the list of render options - it is now available in the **"Material properties"** tab in the right side menu;
- in the **"Presentation"** tab we have added the **"Stereo picture"** panel, enabling you to manage 3D video settings;
- **sliders for controlling material properties now have numeric values** that can be edited using the right mouse button and entered from the keyboard;
- **new settings of the Ray tracing algorithm** - you no longer have to choose the quality level, i.e. the number of samples per pixel, from one sample for one pixel (1x1) to sixteen samples (4x4), or even the number of analyzed reflections and refractions, because we set all these parameters to the maximum level by default for all users! We optimized this feature so you do not have to compromise the quality to keep the computation time short! It will speed up your work and ensure the best visual effects without your effort. In the past, rendering of large scenes at 4K resolution at 4x4 mode caused excessive memory usage on some computers, because a part of the **Ray tracing** calculation was carried out by the processor, and the rest by the graphics card. Now the whole process runs on the graphics card and **there are 32 samples per pixel analysed by default**. Also **the number by reflections and refractions has been set to 20 for each user**, while previously the limit was 16 samples, 10 reflections and 20 refractions.



## NEW TECHNICAL DOCUMENTATION

Together with the new documentation, you gain a lot of **flexibility in presenting your interior designs**. The content and appearance of the documentation depends only on your invention. The documentation can contain any number and types of pages (including exemplary visualizations, technical drawings, projections of selected walls or fragments of the design, drawings of worktops, floor projection, room sections with or without equipment). Some of these elements are selected during the initial configuration of the documentation or during further work with it, while the sections and wall projections can be created individually when the documentation is already generated. **All pages of the documentation can be edited and freely adapted to your current needs.**



An interesting feature of our documentation is the possibility of displaying textures of objects (i.e. pieces of equipment, cabinets and worktops, tiles and paints). Of course, objects can also be presented in a linear form. The module also offers the **ability to insert new objects directly in the documentation** (various shapes, hatches, dimensions, texts and references, tables and images), as well as easy management of the scale and size of the sheet, separately for each page.

It is worth mentioning that **the new documentation supports much larger designs** than the previously used module.

**We wish you a pleasant work  
in the new CAD Decor PRO 3.0!**