CAD PROJEKT K&A

What's new in CAD Kitchens 7.0

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.

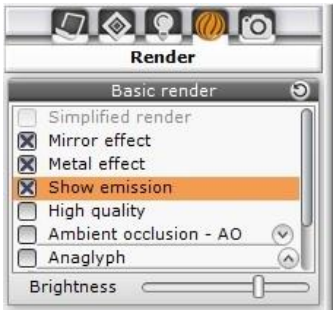
The top menu has remained almost unchanged - with two exceptions:

- a new **"Documentation"** icon has been added, which opens **a new Documentation module that creates 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 are being saved accordingly to the last settings made in the **"Save visualization"** dialog box, that is opened by the **"Export 3D scenes"** icon).

There are four 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 and material databases by manufacturers of furniture boards and fronts, kitchens worktops and others, as well as the library of universal (standard) texture databases by CAD Projekt K&A with the option of uploading any numer of your own textures;
- **"Lights"** – a list of light sources in the design: halogens, fluorescent lamps, point light and sunlight as well as luminous objects, i.e. emitters (objects attributed with a property of a real light emission – available only with Render PRO) and glowing objects (with a property of glow, i.e. simulation of an intense glare);
- **"Render"** – basic rendering options;
- **"Presentation"** – a panel for recording AVI videos (in 2D or 3D) with stereoscopic images and copyright sign options.

Note! Users of an additional Render PRO module will find in the **"Render"** tab also **Radiosity** and **Ray tracing** algorithms, as well as **a new calculation method: Path tracing**. They will be also able to **record AVI videos in a form of a Spherical panorama** (360° animation) (it requires running the **Path tracing** calculations and selecting the **"Spherical panorama"** option in the **"Render"** tab). And after running the **Radiosity** calculations they can create **VR presentations** too, which can be presented in our **obserVeR** VR file viewer.



Note! Customers using the additional **Tile Design Module** or the **CAD Decor** program simultaneously with CAD Kitchens will also have the **"Tiles"** tab for their disposal in the left side menu, which contains the list of databases by tile manufacturers, and after selecting the database and collection, they will see tile previews and options of their insertion and edition in the bottom panel.

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

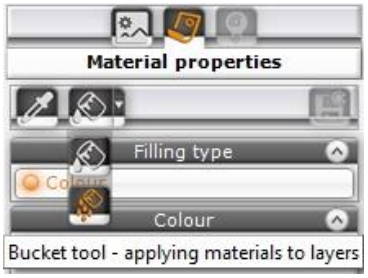
- after selecting the material (by marking the object in the scene), its properties can be changed - in the **"Material properties"** tab;
- after left-clicking on the light source on the list in the left side menu, you can manage its parameters in the **"Light properties"** panel;
- there is one more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

In the bottom menu:

- previews of materials from the currently selected collection of textures are presented here, what improved their visibility (they can be easily managed f. e. by changing their sizes, 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) (previously the miniatures of textures were displayed in the much smaller left panel);
- after switching to the **"Render"** tab in the left side menu, on the bottom panel you will see visualization scenes saved as images by using the **"Export 3D scene"** or **"Quick save"** icons, and if you use the additional Render PRO module – also a preview of **Path tracing** calculations;
- previews of tiles and other linings, as well as options of tile application and edition are also displayed here (if you use the additional Tile Edition Module or the CAD Decor program together with CAD Kitchens and go to the **"Tiles"** tab in the left side menu).

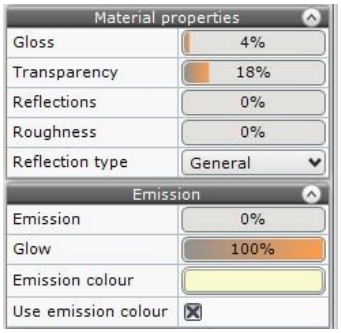
NEW WAYS OF MANAGING MATERIALS

CAD Kitchens in version 7.0 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 of your design can be unified in a few moments!**



"Eyedropper tool" allows to lift (sample) a texture or colour from the indicated pixels along with its properties! The lifted material can be edited in the right panel or immediately used in the scene. Its properties, such as transparency, gloss, 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 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).

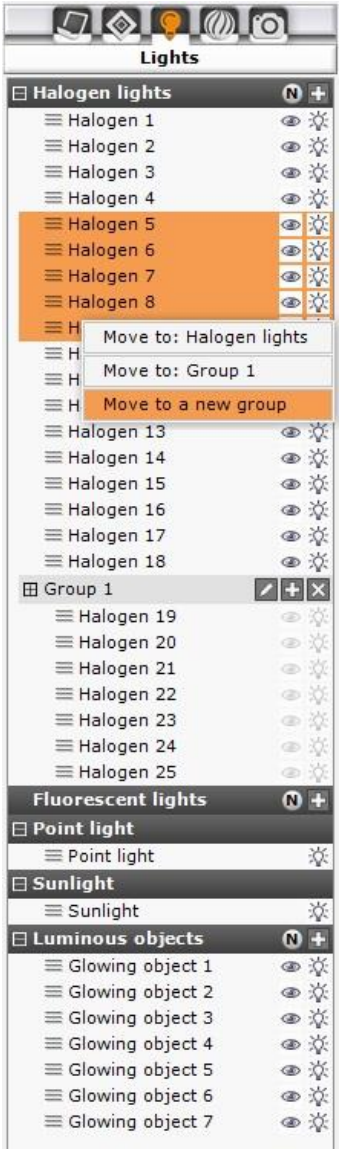
After selecting an object you can edit its properties in the right side menu. A new thing is you are now able to edit surfaces (i.e. walls, platforms) to which no texture has been applied yet. You can move the texture, rotate it or change its size... Textures may be attributed with such parameters as: **gloss**, **transparency**, **reflections** (general or planar: vertical or horizontal), **roughness** (which is vital for the natural appearance of light reflected by ceramic tiles, wooden worktops or floors after using the **Path tracing** algorithm in Render PRO module), as well as light **emission** (own light distribution by any object, that influences the scene) and **glow** (imitation of the intense light, which, however, does not affect the global light distribution) and the **bump mapping** effect.

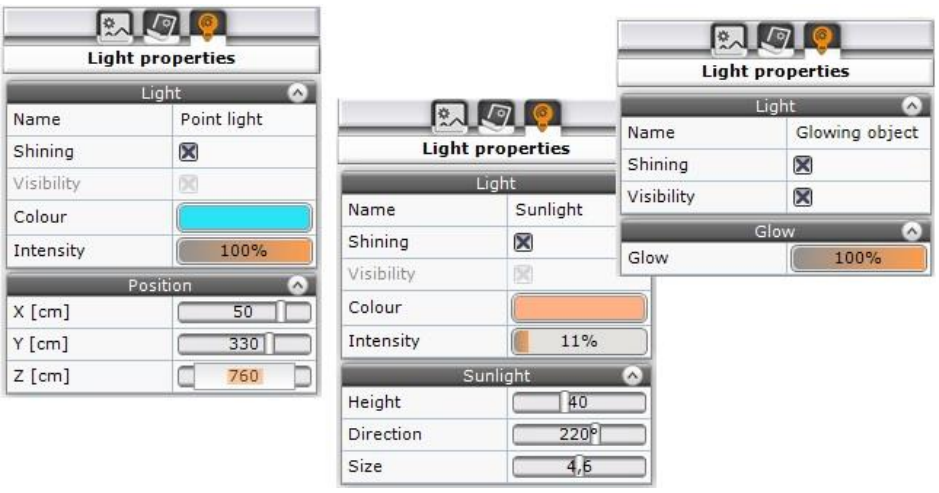


It is also possible to manage a particular layer of an edited object (i.e. one that is difficult to indicate with the mouse, because other layer covers it) - the list of layers is available at the bottom of the right side menu. You can control their smoothing (the level of smoothness of rounded surfaces) 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

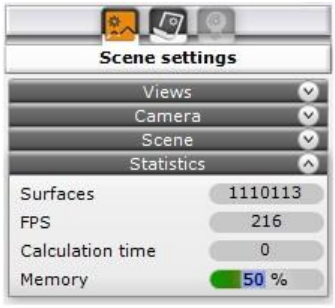
- Lists of light sources on a separate **"Lights" tab** in the left side menu – for **greater convenience and clarity**!
- **Easier management of light sources** – thanks to the ability to create groups of lights with any name;
- Easy transfer of lights between groups by using the "drag-and-drop" method or **"Move to"** function available under the right mouse button;
- You can 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).

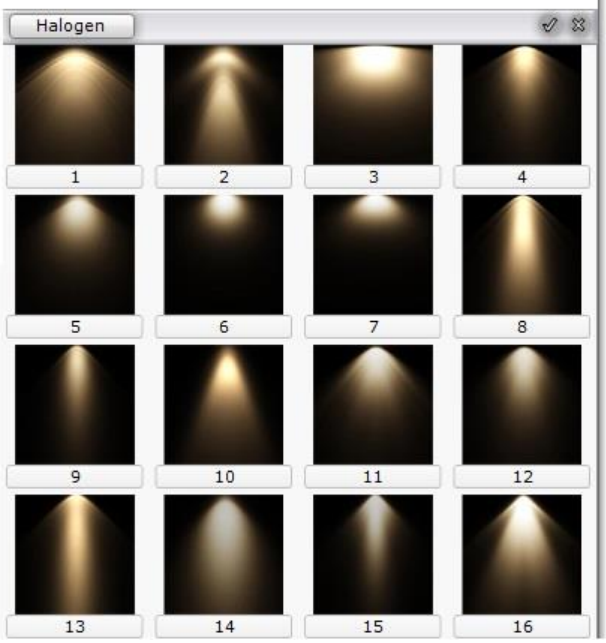


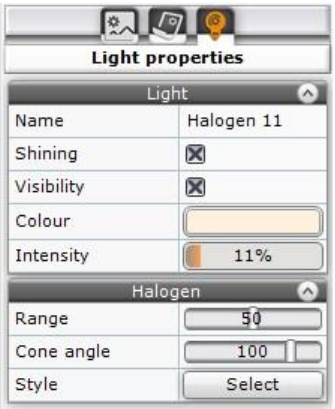


OTHER CHANGES IN VISUALIZATION (WITHOUT RENDER PRO)

- scene settings: "**Statistics**" and light distribution data: **"Style"** (IES selection for halogen lights) have been moved from left side menu to right one.
- the **"Bump mapping"** feature has disappeared from the list of rendering options - it is now available in the **"Material properties" tab** in the right side menu.
- in the **"Presentation" tab** in the left side menu 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.







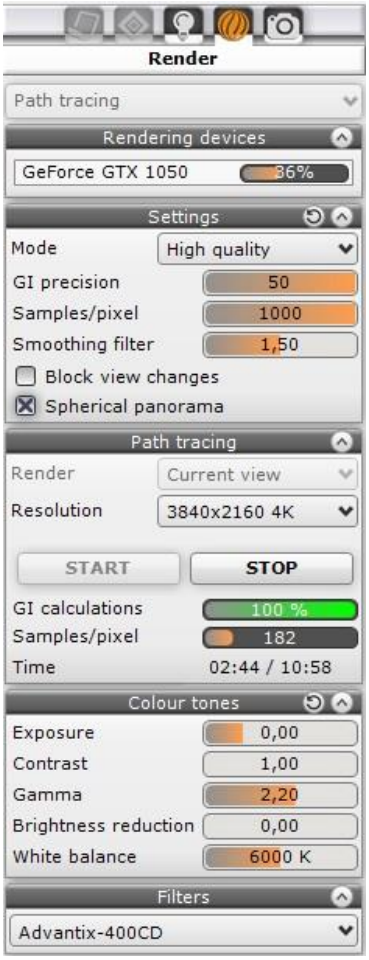
CHANGES IN RAY TRACING OPERATION (WITH RENDER PRO)

The user no longer has to choose the quality level of **Ray tracing**, i.e. the number of samples to be processed 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 at 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 (16 samples) caused excessive memory usage, because some 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 of reflections and refractions has been set to 20 for each user**, while previously the limit was 10 reflections and 20 refractions.

NEW PATH TRACING ALGORITHM (WITH RENDER PRO)

In the additional Render PRO module **there are currently available two algorithms for calculating the global illumination in the scene: Radiosity**, which has been already very well 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 can use many graphics cards** to render a single view!
- in addition to calculating global illumination (GI), **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;
- in the **Path tracing** option panel **you can create 360° presentations** that can be published on Facebook (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;
- the mechanism used in **the Path tracing algorithm allows you to handle bigger designs** than the **Radiosity** algorithm;
- Path tracing also allows and to modify materials parameters (f.e. gloss, transparency, reflections) during the computations – the changes will show on the preview after a few seconds;
- we have also provided **many new colour tones (photographic filters) 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).

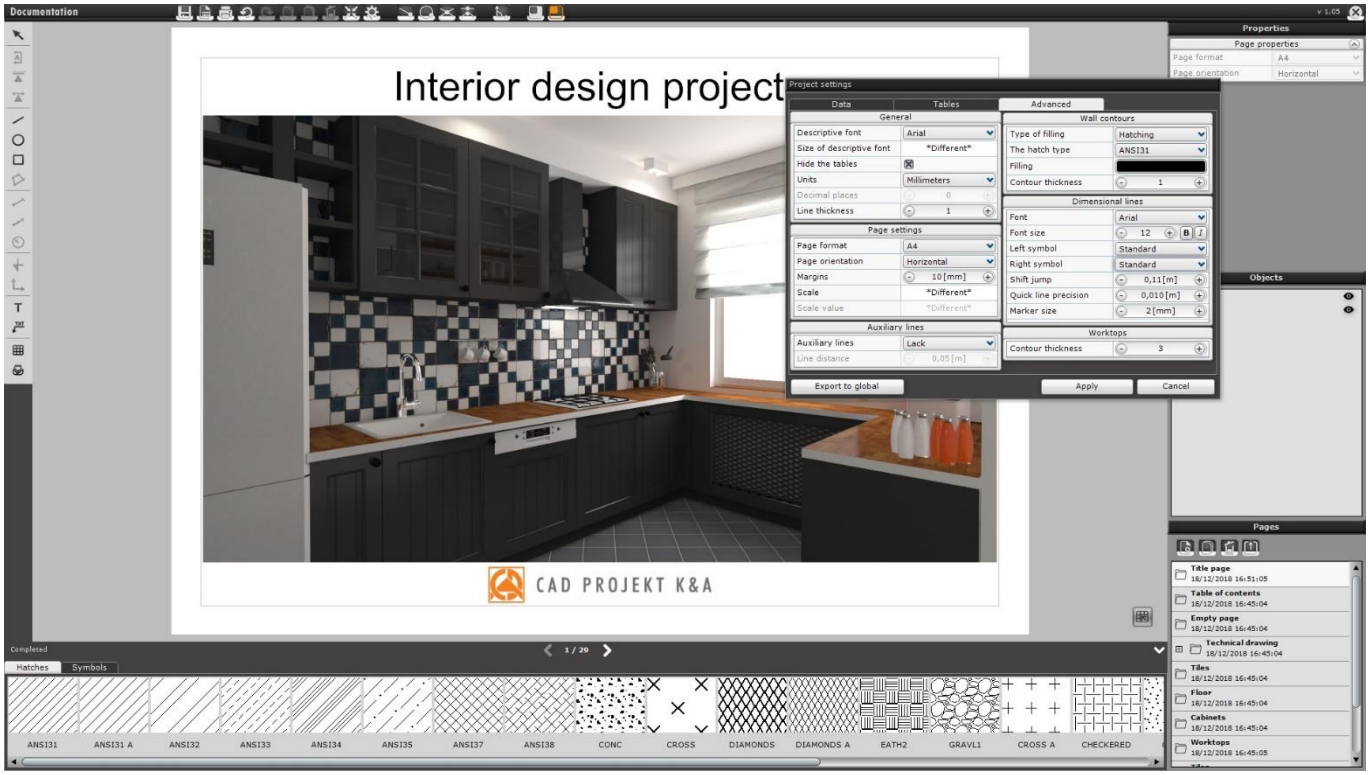


NEW TECHNICAL DOCUMENTATION

In the CAD Kitchens program in version 7.0, we provide **a new Documentation module**. It can be launched in two ways: by selecting the **"Documentation"** icon in the .4CAD environment or in the top visualization menu. With the new documentation, you gain **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, 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 documentation 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 also 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 Kuchnie v. 7.0!