



1. New Functions of Shade3D Ver.20

Shade3D is a comprehensive 3D software that was first developed in 1986. The intuitive tools the software has to offer allows a wide range of applications for comprehensive use by a wide variety of users from hobbyists to professionals.

In Shade3D Ver.20, we have improved the rendering functions completely.

PBR depicts more than reality!

Physical Base Rendering (PBR) is one of rendering methods that handles materials and lights based on the physical rule. PBR is using the physical characteristics by the law of the conservation of energy, and this feature helps the precise definition of material characteristics, color, and light reflection. The decrease of specified rules and know-how required for the reproduction of texture reduces trial and error. Images created by rendering are depicted with more feeling of immersion than the real world.



Fig.1 Rendering result in Ver.19



Fig.2 Rendering by using PBR in Ver.20

For the implement of PBR, Shade3D Ver.20 is covering the 3 features below.

Linear workflow

The linear workflow is one of the color management method that treats colors in the linear color space so that all image materials in work in progress can be displayed same as that in the real world. It contributes to an increase in work efficiency at every stage of 3D CG creation or digital compositing to produce photorealistic results. Recent years a variety of processing and correction is required according to where images are exported such as PC monitor, HD TV, and theater screen. Every intuitive setting menu in Shade3D helps users to focus on what's best.

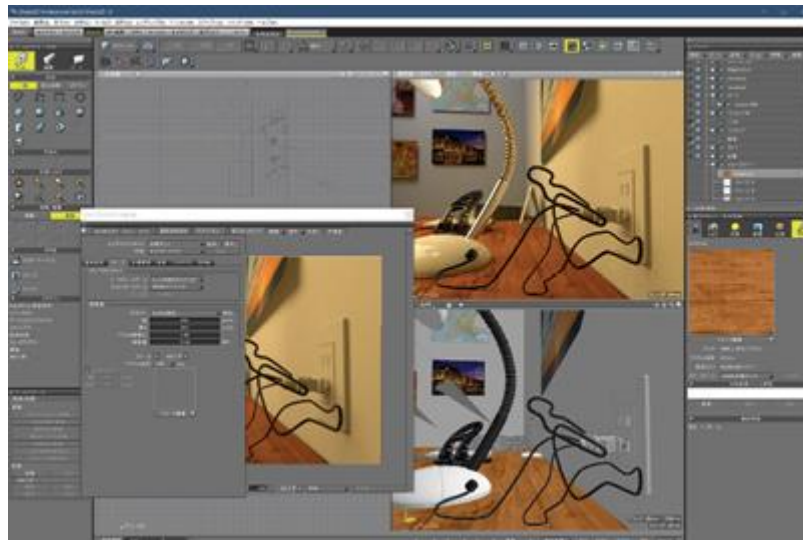


Fig. 3 User interface by using the linear workflow

PBR material

The basic theory of PBR is the way of thinking that material texture in the real world can be put in numeric by combining Roughness and Metalness. In addition to basic parameters of PBR material, function that uses "Principled BRDF" described by Disney has been added. PBR will be reflected to the shading of figure window to enable the real-time preview and adjustment of the real shape.

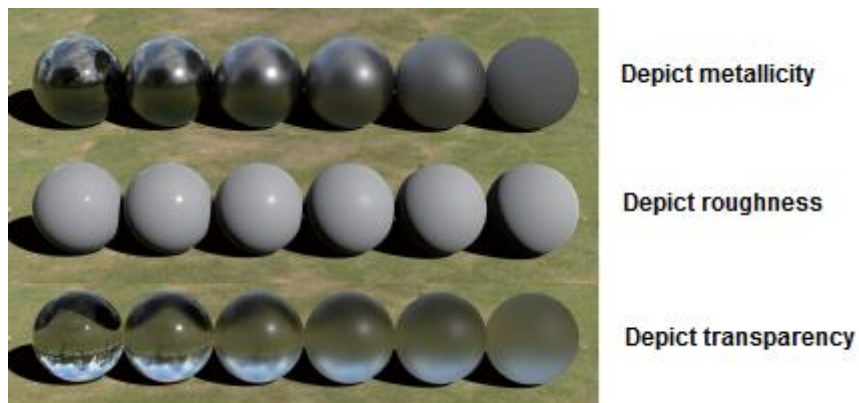


Fig.4 PBR material depiction

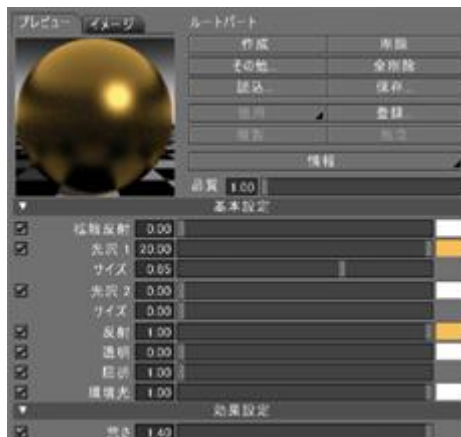


Fig.5 Rendering result in Ver.19



Fig.6 Rendering by using PBR in Ver.20

Global illumination

Global illumination adds more realistic lighting to 3D environment by calculating not just the light coming directly from its source but also light rays from the same source that are reflected by other surfaces in the 3D environment and their impact on the whole space, to generate a natural atmosphere affected by both direct and indirect light. Much less global illumination setting is required when creating new data. In addition, even data created with old technology can be configured to decrease troubles.

Shade3D realizes the well-balanced operability by utilizing the characteristics of element technology essential for improving depiction.

Cooperation with UC-win/Road

3D models created in Shade3D are displayed in UC-win/Road 3D environment. The data communication between UC-win/Road (server) and Shade3D (client) enables the model edit on the Shade3D 3D space.

First step of 3D annotation

FORUM8 has worked on the implementation of "3DA model (3D Annotated Model)" promoted by the Ministry of Land, Infrastructure, Transport and Tourism. Shade3D has got the "3DA model" function with framework line (3D scale line) this time.

Control by block interface

"Block interface" applied in the academy programming education field is available. A flow chart made from the combination of blocks operates Shade3D.

1. About Shade3D

Shade3D is a Japanese-born comprehensive 3DCG software that was first developed in 1986. The intuitive tools the software has to offer allows a wide range of applications for comprehensive use by a wide variety of users from hobbyists to professionals.

It is an all-in-one 3D CG software equipped with essential functions for 3D CG creation including modeling, layout, camera, light source, rendering, and animation.

Shade3D Ver.18 released in 2018 has more precise modeling function and is now certified for the Certification of 3D CAD engineer Grade-1.

Shade3D Official Website: <https://shade3d.jp/en/>

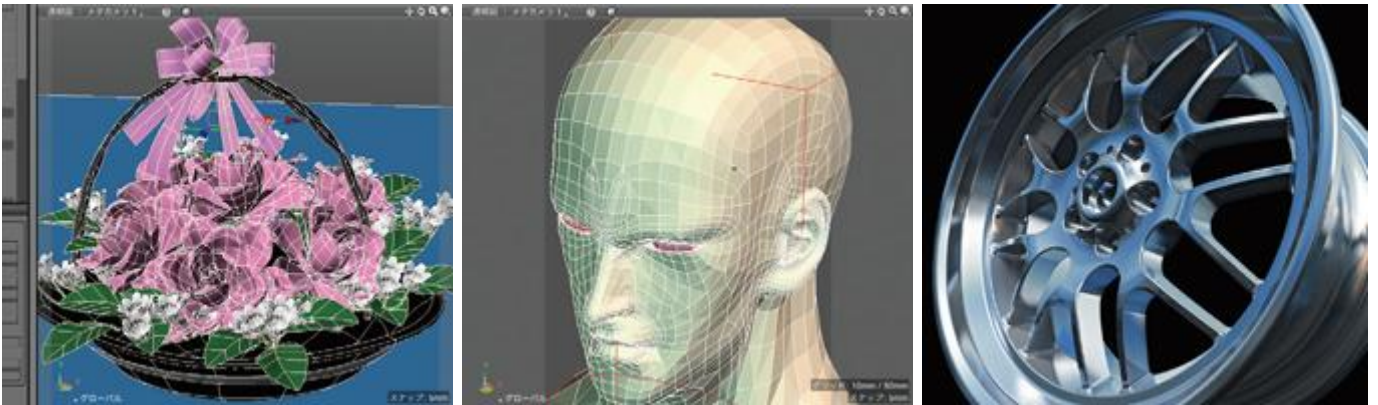
Shade3D ver.19 product overview: https://shade3d.jp/en/products/Shade3DVer19/sh3d19_product.html



2. Modelling function

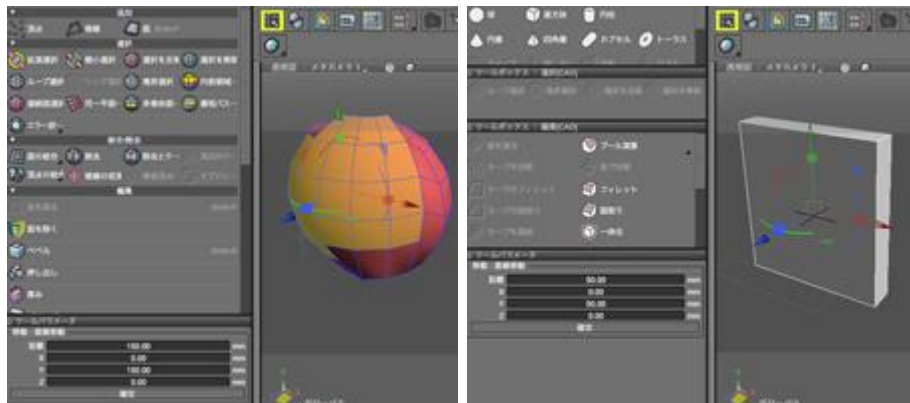
For Shade3D modeling, users can seamlessly use different modeling methods depending on the intended use. In addition to a modeling function by general polygon mesh, it is loaded with a function to handle primitive shapes like sphere and circle, modeling function using Bezier Curve that is characteristic of Shade3D, and other high-precise modeling functions. It also has a NURBS modeling function.

Data created by each method is irreversible (some are reversible) and can be converted to other format.



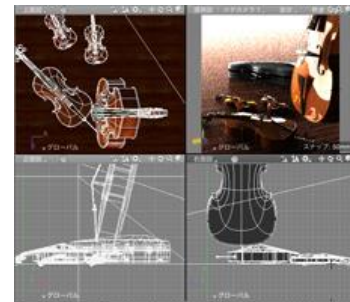
3. Edit function

In addition to move and deformation function by manipulators such as zoom, rotation, shear, move, and size setting, Shade3D also has the following edit functions: Numerical adjusting of parameters, organic deformation by steering operation (Bezier Curve), a dedicated tool (polygon mesh) for vertex, edge line, and surface. Real-time Boolean operation, floating-type fillet, surface chamfering tool, shape arrangement by assembly, and measurement of surface area, volume, and center of gravity.



4. Layout function

The 4-side drawings of Front view, Top view, Side view, and Perspective view (camera angle) can be displayed. Users can switch each view and combine cameras for example bottom, right side, perspective view (camera 1), and perspective view 2 (camera). The division range of drawing can also be changed, and shapes can be arranged freely on scenes by using manipulator and arrange function. Users can change the display of shading for each drawing.



5. Camera function

Multiple cameras can be arranged in a scene. Users can use the same settings as those of real camera such as zoom, pan, dolly, angle of view, tilt, film shift, lens swing, lens tilt, and stereoscopic view. Cameras can be moved freely as object, and its move and settings can be displayed in animation.



6. Light source function

This function includes spotlight, surface light source, line light source, parallel light source, point light source, ambient light, light distribution by IES data, and infinite light source such as sunshine. Sunshine simulation (animation) by setting date, latitude, and longitude is also available.



7. Surface material

In addition to basic settings such as basic colors set by parameters and texture, reflection, transparency, refraction index, texture wrapping, projection, and UV mapping, Shade3D has a function to depict texture of cloud and transparent texture like ivory. If a surface setting is registered as a master surface, it can be set to multiple shapes at once. Users can configure settings on the pre-set list and reuse them for other scenes after saving them in file.



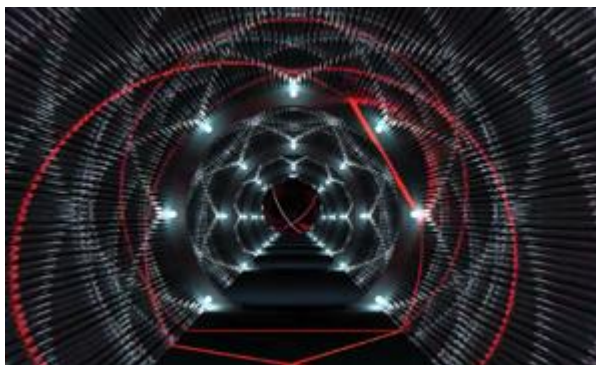
8. Rendering function

Photo-real rendering images created with Shade3D is best for presentation of architecture perspective, product designing, and event planning. It expresses atmosphere by using ray tracing, path tracing, and global illumination photon mapping.



9. Animation function

Shade3D has a variety of animation functions including shifting by joint, rotation, zoom in & out, camera work, move along path, organic deformation by skin, BVH import, walkthrough, depiction by physical calculation, flaming fire, tornado, and suction.





10. File import/export

Shade3D can import and export data in the following formats.

Import

STEP, IGES, DXF, Wavefront OBJ, STL, 3D Studio, BVH, FBX, COLLADA, LightWave Object, SketchUp

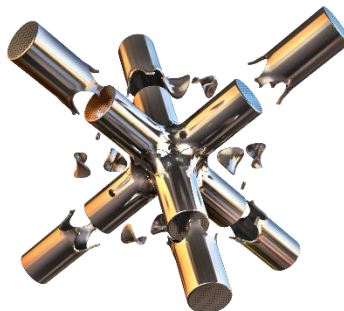
Export

STEP, IGES, DXF, Wavefront OBJ, STL, 3D Studio, Piranesi EPix, Adobe Illustrator, COLLADA, DirectX, FBX
Exporting 3-sided view is available in AI/DXF format.



Shade3D Newsletter #71 Thursday 29 , November 2018.

From hobbyists to professionals, Shade3D is present in a wide range of activities: Automotive Design, Architecture, Interior Design, Advertising Illustrations, Video Games and more. Totally compatible with most of the 3D Printing formats, Shade3D steps into the future allowing its users to see their creations in the real world, corrected and fixed by its optimized 3D Printing Assistant.





In addition of all your favourite tools from the past versions, Shade3D ver.19 is featuring [brand new functions](#), here is the list of these exciting features !

Convert to NURBS, Boolean operation "Floating type", Assembly function, stability improvements and more !



[>>Visit our Product page to learn more!<<](#)
