

# 2018 Feature Comparison

Data Import & Preparation	VRED	VRED Design	VRED Professional
Data Interoperability	-	✓	✓
Scene Graph Editor	✓	✓	✓
Geometry Editor	-	✓	✓
Node Editor	-	✓	✓
Optimization Tools <i>*limited options</i>	*	*	✓
Asset Manager	✓	✓	✓
Multiple Render Windows	✓	✓	✓
Customizable UI	✓	✓	✓
Simple UI	✓	✓	✓

Materials & Lighting	VRED	VRED Design	VRED Professional
Area & Objects Lights <i>Added spotlight beam for disk and rectangular area lights.</i>	✓	✓	✓
Skylight System	✓	✓	✓
Image Based Lighting	✓	✓	✓
DeltaLights (Point, Spot, Directional)	✓	✓	✓
Truelight Materials	✓	✓	✓
Texture Mapping Editor	✓	-	-
Layered Materials	-	✓	✓
Prebaked Ambient Occlusion <i>Ambient Occlusion presets added.</i>	-	✓	✓
OpenGL Real-time Shadows	-	✓	✓
Global Illumination (Path Tracing)	✓	✓	✓
HDRLightStudio Live Link	✓	✓	✓
HDR Light Studio Support <i>HDR Light Studio 4 works with VRED 2014, 2015, 2016 (Windows and OSX). HDR Light Studio 5 works with VRED 2014, 2015, 2016 (Windows Only), 2017.</i>	✓	✓	✓

Camera & Effects	VRED	VRED Design	VRED Professional
Physical Camera Settings	✓	✓	✓
Standard Tone Mappers <i>Reinhard Luminance / RGB, Logarithmic Luminance / RGB, Filmic Tone Mapping.</i>	✓	✓	✓
Standard Pixel Filters <i>Triangle filter, Mitchell Netravalli, Box, Gaussian, Lanczos.</i>	✓	✓	✓
Depth of Field	✓	✓	✓
Motion Blur	✓	✓	✓
Glow	✓	✓	✓
Glare	-	✓	✓

Storytelling	VRED	VRED Design	VRED Professional
2D Backdrops	✓	✓	✓
3D Environments	✓	✓	✓
Variants & Variant Sets	-	✓	✓
Camera Viewpoints	✓	✓	✓
Animations <i>Animation Wizard added.</i>	✓	✓	✓
Clip Editor	✓	✓	✓

Rendering	VRED	VRED Design	VRED Professional
H/W Rendering Modes <i>Realistic, NPR, Baked AO, Indirect Illumination.</i>	-	✓	✓
CPU Rasterizer	-	✓	✓
Off-line Render Passes	✓	✓	✓
Real-time Render Passes	-	-	✓
Render Layers	-	-	✓
Render Queue <i>*session only, no storing</i>	*	✓	✓
Off-line Render Clustering <i>Requires Add-on Module (Render Nodes)</i>	-	✓	✓
Downscale	-	✓	✓

Evaluation	VRED	VRED Design	VRED Professional
Grid & Ruler	✓	✓	✓
Standard Measurements	-	✓	✓
Clipping	-	✓	✓

<b>Presentation &amp; Communication</b>	VRED	VRED Design	VRED Professional
Powerwall Display	-	✓	✓
Presentation Mode	-	✓	✓
Standard Navigation Modes <i>Cursor Key Navigation Added.</i>	✓	✓	✓
3D Mouse & Joystick Support	-	✓	✓
Touch Sensors	-	✓	✓
Standard Stereo Modes <i>Active (Double Buffer) + Passive.</i>	-	✓	✓
Camera Collision Detection	-	-	✓
Remote Session Sharing	-	✓	✓
External Web Interface <i>*only partial supported in design</i>	-	*	✓
HDR Output	✓	✓	✓
Publish Project / Package <i>Save a package containing all referenced data and content. Encryption &amp; Timestamp support.</i>	✓	✓	✓

<b>Advanced Data Import &amp; Preparation</b>	VRED	VRED Design	VRED Professional
Scripting API <i>*script execution only with VRED Design</i>	-	*	✓
External Web Interface	✓	✓	✓
Command Terminal	-	-	✓
PLMXML Import	-	-	✓

<b>Advanced Material &amp; Lighting</b>	VRED	VRED Design	VRED Professional
Photon Mapping with Caustics	-	-	✓
Spectral Rendering <i>Color Spectrum using FWHM. Optis/Osram Spectrum file support.</i>	-	-	✓
Photometric Rendering Parameters	-	-	✓
Subsurface Scattering	-	-	✓
Advanced Material Capabilities <i>Material Chunks, Material Attachments, OpenGL Materials, Material Overrides.</i>	-	-	✓
X-Rite BTF Materials <i>*VRED Design read-only support</i>	-	*	✓
X-Rite AxF Materials <i>*VRED Design read-only support</i>	-	*	✓
Color Science - BRDF Materials	-	-	✓
Rayfile Visualization <i>LucidShape, Osram &amp; Hella Rayfile support. Added support for spectral ray files from LucidShape. Visualization of appearance for illuminated Lightsources added.</i>	-	-	✓
UV Editor	-	-	✓

Advanced Cameras & Effects	VRED	VRED Design	VRED Professional
<b>Tonemapping</b> <i>*only partial for Design and basic</i>	*	*	✓
<b>Vignetting</b>	-	-	✓
<b>Blending</b>	-	-	✓
<b>Advanced Pixelfilters</b> <i>Bspline, Catmull Rom, Sharp Triangle, Sharp Gauss, Sharp B-Spline.</i>	-	-	✓

Advanced Storytelling	VRED	VRED Design	VRED Professional
<b>Advanced Animation Capabilities</b> <i>ClipMaker Add Sequence, SAnimation / VRML Import. Added animated camera motion for zoom to, show all, and view cube. Added dolly-zoom and vertigo effect animations.</i>	-	-	✓
<b>Object Nodes</b> <i>Scene graph functionality nodes, e.g. Sound, Billboards, Distance LOD, and more.</i>	-	-	✓

Advanced Rendering	VRED	VRED Design	VRED Professional
<b>Realtime Render Passes</b>	-	-	✓
<b>Render Layers</b>	-	-	✓
<b>Sequencer</b>	-	-	✓
<b>IES Light Profiles</b>	-	-	✓
<b>Render Farm Support</b> <i>Supports integration with render farm solutions, such as Deadline, Qube/pipeline FX, Smedge. Note, requires custom integration.</i>	-	-	✓
<b>Color Profiles</b> <i>*VRED Design sRGB support only</i>	-	*	✓

Advanced Evaluation	VRED	VRED Design	VRED Professional
<b>Direct NURBS Rendering</b>	-	-	✓
<b>True NURBS (interactive retessellation)</b>	-	-	✓
<b>Gap Analysis</b>	-	-	✓
<b>Analytic Rendering Modes</b> <i>Curvature shader added.</i>	-	-	✓
<b>Annotations</b>	-	-	✓
<b>Advanced Measurements</b> <i>Measurement for radius, diameter, circumference.</i>	-	-	✓

Advanced Presentation & Communication	VRED	VRED Design	VRED Professional
<b>Immersive Display Support</b> <i>Including CAVE Support.</i>	-	-	✓
<b>Oculus Rift HMD Support</b> <i>Works in presenter</i>	-	-	✓
<b>Motion Tracking</b>	-	-	✓

<b>Advanced Stereo Display</b> <i>Anaglyphic + Multiview Stereo Rendering</i>	-	-	✓
<b>VRED App (Web/Mobile Presentation Controller)</b>	-	-	✓
<b>Display Clustering OpenGL</b>	-	✓	✓
<b>Display Cluster Raytracing</b> <i>Display Cluster und Raytracing Pro only (needs additional licenses)</i>	-	-	✓
<b>Real-time Render Clustering</b> <i>*requires Add-on Module (Render Nodes)</i>	-	-	*
<b>Raytracing Cluster</b> <i>*offline only for Design</i>	-	*	✓
<b>Scenespace Ambient Occlusion</b>	-	✓	✓
<b>Simple UI</b>	✓	✓	✓
<b>UV Editor</b>	-	-	✓
<b>Import Alias Layer</b>	-	✓	✓
<b>Geometry Editor</b>	-	✓	✓
<b>Camera Collision Detection</b>	-	-	✓
<b>Meta Tags (Work with geometry more effectively)</b>	-	✓	✓
<b>Navigation in Scene / Select object behind</b>	-	✓	✓
<b>Analytic Rendering Modes</b>	-	✓	✓
<b>HMD Support</b> <i>Works with presenter</i>	-	-	✓
<b>Curve Animation</b>	-	✓	✓
<b>Renderlayer</b>	-	-	✓
<b>Renderpasses</b> <i>*nur Offline</i>	✓*	✓*	✓
<b>Alias Curvature Mode</b>	-	-	✓
<b>Denoise Filter</b>	-	-	✓
<b>Measured Material</b>	-	-	✓
<b>Layered Glass material</b>	-	✓	✓
<b>Bake Light and Shadows</b>	-	✓	✓
<b>Shells and Components</b>	-	✓	✓
<b>Cluster Manager</b>	-	-	✓
<b>Light Texture Support</b>	-	-	✓
<b>HMI Visualization</b> <i>*read only in design</i>	-	✓*	✓
<b>Omnidirectional Stereo Rendering</b>	-	✓	✓