# MENTAL RAY

Mental Ray is a feature-rich, programmable, biased ray-tracing render engine. It has been used by the industry and professionals for over 28 years (the first release have been built in 1989 by Mental Images), Mental Ray has become a standard for photo realistic rendering across the film, visual effects, and design industries (Hulk, The Matrix Reloaded & Revolutions, Star Wars: Episode II – Attack of the Clones, The Day After Tomorrow and Poseidon are just few examples of products made using Mental Ray). In 2003 Mental Images was awarded an Academy Award for their contributions to the mental ray rendering software for motion pictures.
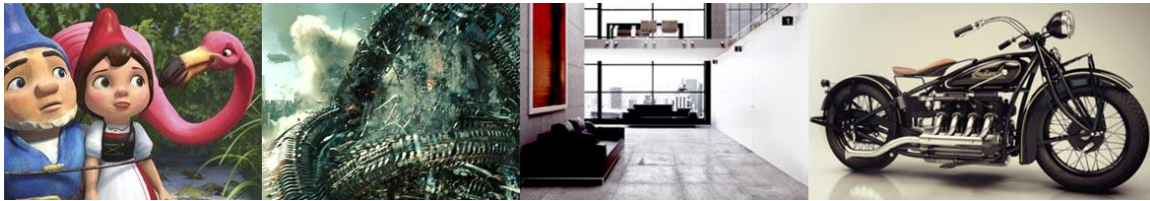
V-RAY

V-Ray is probably the most famous and used render engine nowadays. It is developed by Chaos Group (Bulgarian: Хаос Груп), a Bulgarian company based in Sofia, Bulgaria, established in 1997. V-Ray is used in media, entertainment, and design industries such as movie, industrial and product design, video games and architecture. It can use traditional biased Raytracing (global illumination, photon mapping) or Brute Force unbiased algorithms. You can use V-Ray with almost any 3d software thanks to their very well written plugins. V-ray also has its own GPU render engine (V-Ray RT) used for IPR renders.


FIRST TEST: INTERIOR RENDER

Same scenario for both render engine: Sun&sky + area light. The scene consists of 3M vertices, plain polygons, 3 diffuse bounces, no caustics, SSS, dispersion effects, hair or fur. I kept the environment

pretty flat to make us clearly see and compare both noise and render quality. GI-NEXT for Mental Ray, BF + LC for V-Ray. 1 hour of render.

At glance the two renders seems identical. Anyway if you take a closer look you can see some significant differences
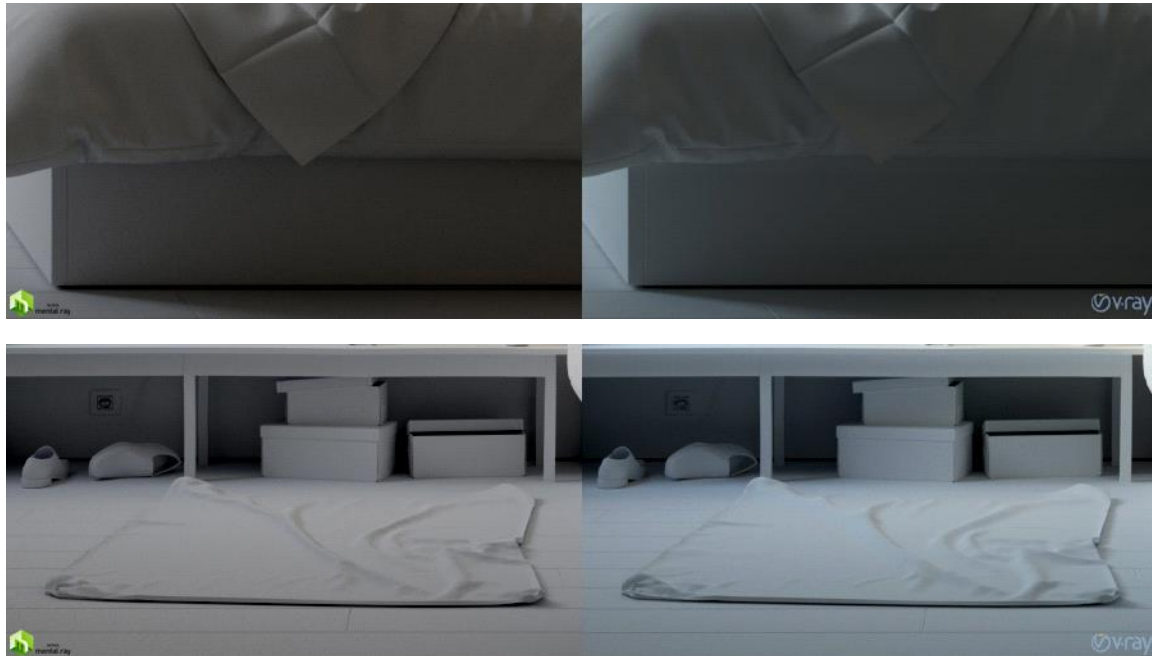
CONCLUSIONS

Mental Ray and V-Ray are two very similar render engines, based on my experience.

V-ray have some unique shaders to do special effects (like architectural slices), dirty and curvature maps, but Mental Ray have the revolutionary MILA shader, which is an amazing shader for pro artists. V-ray has its own external render window (V-Ray framebuffer) where you can do some color correction .

Mental Ray has a much more detailed GI compared to the smooth V-Ray's Irradiance/Light Cache, this is a huge difference for final-production quality renders: Mental Ray delivers more detailed and realistic images.