

SOLUTION BRIEF

AI / Media

Cinema 4D Improves CG Workflows with AI-Trained Denoising

art by Stefan Voigt

With their Cinema 4D software, Maxon has been providing solutions to 3D artists

CINEMA 4D

MAXON
A NEMETSCHEK COMPANY



Advanced 3D Modelling, Made User-Friendly

From simplistic tech demos to an exciting artistic discipline, the field of visual effects or VFX has accelerated by leaps and bounds over the past thirty years. The art form is an essential element in a diversity of industries like design, advertising, architecture, games, movie-making, and more.

Maxon remains at the forefront of it all. Cinema 4D – its award-winning 3D modeling, animation and rendering solution – provides professional artists with the tools and features they need to create visually impressive 3D artwork, including:

- **User-friendly modeling and sculpting toolkits,**
- **Life-like animation, and**
- **Realistic lighting effects.**

While the functionality is advanced, the software gets high marks for its intuitive tools and easy-to-navigate user interface. The relative ease of use allows those new to the software to start creating high quality work in short order. Likewise, the software's tools and technologies, which include Intel® Software, under the hood saves artists time.

AI-trained Denoising for Sharper Renders

3D artists spend the bulk of their time in the Scene Creation and Lighting and Rendering stages of their workflow. For example, 3D artist and animator Stefan D. Voigt for instance, spends roughly:

8 percent of his time in pre-production > 45 percent in scene creation > 45 percent in lighting and rendering > 2 percent in post-production.

A lot of this time is allocated to rendering out scenes, both when providing previews to clients and during final output. This time consuming process can result in a sizable decrease in return on investment.

That's why Maxon has implemented the Intel® Open Image Denoise filter library (part of **Intel® oneAPI Rendering Toolkit**) in Cinema 4D. Instead of sitting through a lengthy render, lower the sample settings for a faster rendering time, and turn on the denoiser to filter out noise. This method produces a high-quality render in less time, allowing Voigt to create faster.

Render Faster with Intel® Technologies

In order to achieve high-quality denoising, **Intel® Open Image Denoise** library relies on pretrained filters using deep learning algorithms to enhance the sharpness of the image. According to Philip Losch, CTO at Maxon, "The Intel Open Image Denoise gives our users a huge advantage when it comes to rendering time."

Cinema 4D utilizes several other Intel technologies, including the Intel® Embree library's kernel and Intel® Advanced Vector Extensions (Intel® AVX) in powerful Intel® processors for fast, photo-realistic rendering. Cinema 4D achieves high performance in several areas with the help of Intel technologies.

Intel® Core™ and Intel® Xeon® family processors utilize multiple cores and Intel® Hyper-Threading Technology to accelerate the 3D artist's workflow. Tasks such as scene creation and viewport performance will benefit from the eight core Intel® Core i9-10980HK processor, while resource-intensive jobs like lighting and rendering are better suited for high-core count Intel® Xeon®. "My rendering times were cut in half after upgrading to an Intel® Xeon® W-3175x processor." said Stefan D. Voigt, 3D artist and animator.

Empowering 3D Artists

Intel and Maxon are expanding what's possible in the field of 3D art and animation. This versatile software provides 3D artists with the tools and features they need for creative self-expression and photorealistic accuracy.

Intel's software tools, hardware, and services empower artists to speed up their workflow and interface with clients faster.

Learn More

Cinema 4D was built with software libraries and components from the Intel® oneAPI Rendering Toolkit.

Download a free trial now. maxon.net/try

Learn more about Intel Open Image Denoise library:

software.intel.com/oneapi/render-kit

Learn more about simplified cross-architecture development and Intel® oneAPI Toolkits:

software.intel.com/oneapi

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