FRAUNHOFER INSTITUTE FOR COMPUTER GRAPHICS RESEARCH IGD

PRESS RELEASE

Cuttlefish driver available to all Stratasys J750 3D printer users

High-volume 3D printing is entering the next phase: At formnext 2017, Stratasys announced its open Voxel Print interface for the J750 full-color multi-material 3D printer. The J750 can now be used with Fraunhofer IGD's Cuttlefish printer driver, which has been successfully leveraged for past Stratasys projects.

(Darmstadt, Germany) Cuttlefish is a universal 3D printer driver developed by Fraunhofer Institute for Computer Graphics Research IGD. It takes scanned data or 3D models created by design and texture painting tools – and turns them into 3D prints with highly accurate color and translucency reproduction via Stratasys' J750 printer.

At the formnext 2017 trade fair, Stratasys unveiled the GrabCAD Voxel Print solution for its J750 3D full-color multi-material printer – "unlocking" the system for use with third-party software. Fraunhofer IGD's Cuttlefish interfaces seamlessly with GrabCAD Voxel Print. "Fraunhofer IGD was one of our first GrabCAD Voxel Print users, allowing them to develop Cuttlefish to fully exploit the color and translucency capabilities of the Stratasys J750 full color 3D Printer," says Stratasys Education Product Leader Tomer Gallimidi.

The driver has demonstrated its effectiveness already: Award-winning animation studio LAIKA started using Stratasys' J750, Cuttlefish and Voxel Print over two years ago on their next unannounced film. While the stop motion feature film is still in production, LAIKA has printed more than 80,000 faces (and counting) using Cuttlefish. Oscar® nominee Brian McLean, LAIKA's Director of Rapid Prototype, said, "Cuttlefish's handling of complex geometries and accurate color has afforded us a level of control in a 3D print we have only dreamt about until now. Combining Cuttlefish, Voxel Print and Stratasys' J750 has allowed us to create highly detailed colored 3D prints and extremely subtle facial animation." Now, all J750 owners will be able to leverage Cuttlefish for their tasks.

Daniela Welling | Head of Corporate Communications
Fraunhofer Institute for Computer Graphics Research IGD
Fraunhoferstraße 5 | 64283 Darmstadt
Phone +49 6151 155-146 | Fax +49 6151 155-199
presse@igd.fraunhofer.de | www.igd.fraunhofer.de

PRESS RELEASE

The latest version of Cuttlefish supports RGBA textures that contain both color and translucency information, ranging from fully opaque to fully transparent. The driver enables users to print multiple overlapping models, each with one or more RGBA textures.

Philipp Urban, Head of the 3D Printing Competence Center at Fraunhofer IGD, explains: "RGBA data based 3D models are supported by 3D file formats such as OBJ or WRL, and can be created by many design and texture painting tools. Furthermore, RGBA textures can be made or modified by popular image editing tools, such as Adobe Photoshop. Cuttlefish closes the quality gap between virtual design and its 3D-printed reproduction." These capabilities are evident in a printed human anatomy model formed from 28 sub-parts. Each of these is assigned a unique material, comprising over 425 megapixels of color texture data. Transparent parts of the model are created simply by modifying the RGBA data.

More Information about Cuttlefish: https://www.cuttlefish.de/

Daniela Welling | Head of Corporate Communications
Fraunhofer Institute for Computer Graphics Research IGD
Fraunhoferstraße 5 | 64283 Darmstadt
Phone +49 6151 155-146 | Fax +49 6151 155-199
presse@igd.fraunhofer.de | www.igd.fraunhofer.de

PRESS RELEASE

Photo: Cuttlefish turns complex models with multiple sub-parts and RGBA textures into 3D prints with highly accurate color and translucency.
(Rights of use: Fraunhofer IGD)

Daniela Welling | Head of Corporate Communications
Fraunhofer Institute for Computer Graphics Research IGD
Fraunhoferstraße 5 | 64283 Darmstadt
Phone +49 6151 155-146 | Fax +49 6151 155-199
presse@igd.fraunhofer.de | www.igd.fraunhofer.de

PRESS RELEASE

Institute profile

Founded 30 years ago, Fraunhofer IGD has become the world's leading institution for applied research in the field of visual computing. Visual computing means image and model-based IT. In simple terms, it describes the capability of transforming information into images (computer graphics) and extracting information from images (computer vision). The numerous application scenarios include human/machine interaction, interactive simulation, and modeling situations.

Our developers at the sites in Darmstadt, Rostock, Graz, and Singapore develop new technical solutions and prototypes all the way up to the market readiness stage. In collaboration with our partners, this results in application solutions that are custom-tailored to customer requirements.

Our approaches facilitate the work with computers and are efficiently used in the industry, in everyday life, and in the healthcare sector. Our research highlights includes assisting people in the Industry 4.0, the development of key technologies for the Smart City, and the use of digital solutions in the field of Individual Health.

Through applied research, we support the strategic development of the industry and economy. Especially small and medium-sized enterprises as well as service centers can benefit from this and be successful on the market with the help of our leading technologies.

Daniela Welling | Head of Corporate Communications
Fraunhofer Institute for Computer Graphics Research IGD
Fraunhoferstraße 5 | 64283 Darmstadt
Phone +49 6151 155-146 | Fax +49 6151 155-199
presse@igd.fraunhofer.de | www.igd.fraunhofer.de