

PRESS RELEASE

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Fraunhofer Digital Cinema Alliance's Spatial-AV Project Overcomes Technical and Cost Barriers for 3D Production

The Fraunhofer Digital Cinema Alliance, the driver of enhanced moving picture and audio experiences, today announces new developments and workflow solutions from its Spatial-AV Project, the Alliance's initiative to automate the procedures of 3D production and provide intelligent, modular, multi-sensory recording and production systems for immersive audio-visual media. One year into the Project's research and development efforts, Fraunhofer delivers the solutions to further combat technical production costs and enhance creative filmmaking in the era of 3D.

"At Fraunhofer, we're dedicated to developing new, technical opportunities that let professionals return to the simplicity of cinema's past, while achieving the highest-possible quality and standards to be competitive in today's market," said Dr. Siegfried Foessel, spokesman for the Fraunhofer Digital Cinema Alliance. "The Spatial-AV Project makes it possible to focus on creativity, as opposed to the complex technical adjustments and resources that come along with 3D production."

Under the Spatial-AV Project, scientists from the Fraunhofer Digital Cinema Alliance pool expertise to develop future oriented systems for the enhanced production of 3D. This includes the introduction of first-of-its-kind prototypes of cameras, computational imaging methods and audio-visual coherence. Recent developments include camera settings for auto-stereoscopic 3D recording, omnidirectional camera set-ups for 360 degree recording and promising new methods based on lightfield acquisition technologies for professional video and movie productions.

At IBC, Fraunhofer is demonstrating the Spatial-AV Project's latest innovations including:

The most innovative lightfield camera recording system to date

Using sparse angular sampling, the new four-by-four array of Fraunhofer provides 16 slightly different views, capturing the lightfield in one shot. Key advantages include different viewing angles, focuses and the automatic creation of depth maps. In the future, this will also lead to the elimination of the need for a green screen in moving picture production. With Fraunhofer's lightfield technology, professionals can now control artistic effects, such as the Matrix "bullet time" or vertigo effects, in

Head of Press and Public Relations

Thoralf Dietz | Phone +49 9131 776-1630 | thoralf.dietz@iis.fraunhofer.de | Fraunhofer Institute for Integrated Circuits IIS |
Am Wolfsmantel 33 | 91058 Erlangen, Germany | www.iis.fraunhofer.de

Editorial notes

Angela Raguse | Phone +49 9131 776-5105 | angela.raguse@iis.fraunhofer.de | Fraunhofer Allianz Digital Cinema | www.dcinema.fraunhofer.de

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postproduction. The result is a streamlined production process that alleviates costs and provides the utmost creative freedom for producers.

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New easy-to-use miniaturized OmniCam-360 system

Fraunhofer's new system enables the real-time acquisition of 360-degree ultra-high definition panoramic video. This scalable, mirror-based multi-camera rig captures ultra-high-resolution 3D video panoramas that are exhibited with a flexible multi-projection system. Viewers are provided with an immersive viewing experience, giving them the feeling of watching an event on-site live from the very best seat.

The first prototype of a microphone management solution for spatial audio

Audio-visual coherence, the joint recording, editing, and matching of acoustic and visual perspectives, is a main focus of the Alliance's Spatial-AV Project. The microphone management solution, an interactive system of 3D audio reproduction for headphones, allows sound engineers to optimize recordings on set by facilitating rapid and intuitive control over the audioscape even with a large number of microphones. This is possible any time, during or after production.

Launched in 2012, research and development activities under the Spatial-AV Project are scheduled to last three years. Further research and development under the project will follow over the coming two years to deliver additional, future-oriented systems.

IBC attendees can experience demonstrations of the Project's innovative solutions at the Fraunhofer Digital Cinema Alliance booth 8.B80. Further information is available at:

<http://www.dcinema.fraunhofer.de/en/>.

About the Fraunhofer Digital Cinema Alliance

The Fraunhofer Alliance Digital Cinema consists of four Fraunhofer institutes specializing in video and audio technologies. With the start of digitalization in the moving picture industry, these institutes joined forces in 2004 to offer R&D expertise with one face to the customer. The institutes are all well known in the industry for award-winning developments and standards like MP3, H.264, the DCI Compliance Test Plan for Digital Cinema, IOSONO, easyDCP software etc. In addition, they are contributing to ISO, SMPTE, ISDCF, EDCF.

About Fraunhofer

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. At present, the Fraunhofer-Gesellschaft maintains 66 institutes and independent research units. The majority of the more than 22,000 staff are qualified scientists and engineers, who work with an annual research budget of 1.9 billion euros. Roughly two thirds of this sum is generated through contract research on behalf of industry and publicly funded research projects. Branches in the USA and Asia serve to promote international cooperation.