

## **Press Release**

Erlangen/Las Vegas, April 4, 2011

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#### Fraunhofer Institute for Integrated Circuits IIS

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## Fraunhofer IIS Announces Availability of CURATOR Archive Suite

Lossless compression storage solution now available for Digital Film Archives at NAB 2011

Fraunhofer IIS's Moving Picture Technologies department, with deep expertise in digital cinema and JPEG2000, announces the general availability of its CURATOR Archive Suite at NAB 2011, April 11-14, 2011 in Las Vegas, NV, Booth SU5520.

The CURATOR Archive Suite is a long-term archive solution that provides the complete suite for post production, archiving, and playback from the archive. It includes the tools to create both a Master Archive Package (MAP) and an Intermediate Access Package (IAP).

The software creates MAP files with lossless coding. For IAP files, it creates an MXF-Container in 2k and 4k horizontal resolutions. IAP is an extension of a Digital Cinema Package (DCP) and can be used for fast access and further distribution. DCPs can be directly extracted from the IAP without recoding.

"In production, lossless compression is critical to preserving the integrity of digital film archives," said Dr. Siegfried Foessel of Fraunhofer IIS's Moving Pictures Technology department. "This will be especially important as projectors and film production evolves to 8k or to higher color gamuts, because the archives will be only capable of producing a file for remastering based on their archived quality."



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The suite consists of three components:

- CURATOR Creator to package the image, audio and metadata files for the creation of a MAP, IAP or DCP.
- CURATOR Player for real-time playback of the MAP or IAP on a standard PC for quick quality checks and unpackaging.
- Fraunhofer J2K Quicktime plug-in to convert images into MOV files with JPEG2000 encoded images.

Fraunhofer IIS's CURATOR Archive Suite integrates a complete workflow for archives. The workflow starts when the analog material is converted to digital data and is done at the maximum native resolution and bit depth to preserve quality. The image is then encoded to JPEG2000, either with the Fraunhofer J2K plug-in for Quicktime or the CURATOR Creator allowing the choice of the appropriate format. After encoding, the next step is the mastering and packaging of a MAP or IAP. Image, audio and metadata are all packaged into the MAP or IAP. Trackfiles are packed into separate (Metadata Exchange Format) MXF containers and linked together with metadata XML files. The software creates a digital data package containing all these components and adds a Packaging List (PKL) and a Composition Play List (CPL). For playback and extraction, the film can be decoded for a quality check.

Fraunhofer IIS concentrated on integrating standards-compliant pre-settings. The import of DPX, TIFF, J2K and MOV files is possible. It can also store technical and descriptive meta-

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data in XML format. The easy-to-use software is based on the standardized JPEG2000 profiles for digital archiving and meets the standards defined by the International Organization for Standardization ISO (ISO15444-1:2004AMD2) and the International Federation of Film Archives FIAF.

As a partner of the Digital Cinema Initiatives (DCI), the Moving Pictures Department of Fraunhofer Institute for Integrated Circuits IIS is deeply involved in the challenges of digital cinema technology and standardization. With a focus on JPEG2000, the department provides technological innovations for the whole digital cinema workflow, for 3D viewing and multi-platform distribution. This includes the areas of production (camera and storage), data compression, post processing, distribution and digital archiving.

Fraunhofer IIS is actively working in reputated organizations and bodies like International Organization for Standardization ISO, ISDCF (Inter-Society Digital Cinema Forum), SMPTE (Society for Motion Picture and Television Engineers), FKTG (German Society for Broadcast and Motion Picture), and in the EDCF (European Digital Cinema Forum). These contributions enable research and development activities based on international standards.

The Fraunhofer IIS Moving Picture Technologies department is based in Erlangen, Germany. Fraunhofer IIS in Erlangen, Germany, ranks first among the Fraunhofer Institutes concerning headcount and revenues. As the main inventor of mp3 and co-inventor of the MPEG 4 AAC audio coding standard, Fraunhofer IIS has reached worldwide recognition.

In close cooperation with partners and clients the Institute provides research and development services in the following areas: Digital radio broadcasting systems, audio and multimedia technology, digital cinema systems, design automation and integrated circuits, wired, wireless and optical networks, localization and navigation, high-speed camera systems, imaging systems and nanofocus X-ray technology, medical sensor solutions and supply chain services.

The Fraunhofer IIS organization is part of the Fraunhofer-Gesellschaft, based in Munich, Germany. Fraunhofer-Gesellschaft is Europe's largest applied research organization and is partly funded by the German government. With 17,000 employees worldwide, Fraunhofer-Gesellschaft is composed of 59 Institutes conducting research in a broad range of research areas.

For more information, contact moving-picture@iis.fraunhofer.de, or visit www.iis. fraunhofer.de.

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