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Fraunhofer IIS introduces its JPEG XS ultra-low-latency software implementation at NAB 2022

Erlangen, Germany: The Fraunhofer Institute for Integrated Circuits IIS announces its ultra-low-latency software implementation of JPEG XS on DELTACAST's video I/O solution with a latency far below one frame. This will allow broadcast equipment developers and implementers to benefit from JPEG XS in terms of low latency but also low complexity within their devices and equipment. It will boost the possibility to transmit extremely high-quality images and videos over IP and to set up collaborative, remote processes within a broadcast or professional video production environment.

The standardized JPEG XS codec makes it possible to handle high-quality media workflows from acquisition to distribution using Internet Protocol (IP) and Ethernet infrastructure. With the availability of Ethernet interfaces with larger bandwidth and the mezzanine codec JPEG XS, commercial off-the-shelf components from the IT industry and standard internet connectivity can now be used to transmit extremely high-quality images and videos over IP in local and wide area networks with the lowest latency. But today, many video I/O devices are still based on SDI. To bridge the gap between SDI and IP, while keeping ultra-low latency in the overall system, special I/O devices with subframe access are necessary. Together with DELTACAST's I/O solution, the proof of JPEG XS extremely low latency below one frame makes standard latencies of five frames and more things of the past. The Fraunhofer IIS JPEG XS SDK can play to its strength in this combination to meet the strong demand for almost "zero" latency as well as visually lossless quality with compression ratios of up to 10:1. It also supports resolution up to 8K and features a frame rate of 24–120fps. JPEG XS is optimized for multiple platforms including FPGA, ASIC and CPU and guarantees multi-generation robustness.

"We are very pleased to see that the JPEG XS implementation, together with our I/O video cards, can meet the expectations of ultra-low-latency transmission of professional workflows in this joint effort between Fraunhofer and our company," explains Gérald Olivier, Head of Product Marketing at DELTACAST.

JPEG XS excels with ultra-low latency and an attractive licensing program

JPEG XS is tailored to the specific requirements of the broadcast and movie production industry and to high-quality in-house distribution. "We are looking forward to further solutions that make the advantages of JPEG XS available to the market, because this is

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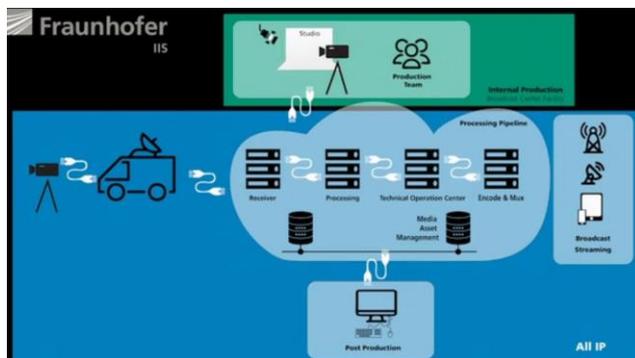
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an essential part of Fraunhofer’s applied research and development technology transfer activities,” said Professor Siegfried Foessel, Head of the Moving Picture Technologies Department at Fraunhofer IIS. “To this end, we have set up a license program of JPEG XS that enables each manufacturer, developer or provider to find the right license model for their business.”

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More information about the codec: <https://iis.fraunhofer.de/jpegxs>



All IP-based workflows due to JPEG XS integration.

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FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS**About DELTACAST**

Born from the TV broadcast industry, DELTACAST is a leader in the design, development and manufacturing of live video transport and processing solutions for OEMs and developers. DELTACAST's solutions deliver the highest quality and the lowest latency to serve the most demanding applications in TV broadcasting, ProAV industry, medtech, aerospace and many other markets.

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The Fraunhofer-Gesellschaft, headquartered in Germany, is the world's leading applied research organization. Its research activities are conducted by 76 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of more than 30,000, who work with an annual research budget totaling more than 2.9 billion euros.

The **Fraunhofer Institute for Integrated Circuits IIS**, headquartered in Erlangen, Germany, conducts world-class research on microelectronic and IT system solutions and services. Today, it is the largest institute of the Fraunhofer-Gesellschaft. Research at Fraunhofer IIS revolves around two guiding topics:

In the area of **"Audio and Media Technologies"**, the institute has been shaping the digitalization of media for more than 30 years now. Fraunhofer IIS was instrumental in the development of mp3 and AAC and played a significant role in the digitalization of the cinema. Current developments are opening up whole new sound worlds and are being used in virtual reality, automotive sound systems, mobile telephony, streaming and broadcasting.

In the context of **"cognitive sensor technologies"**, the institute researches technologies for sensor technology, data transmission technology, data analysis methods and the exploitation of data as part of data-driven services and their accompanying business models. This adds a cognitive component to the function of the conventional "smart" sensor.

More than 1100 employees conduct contract research for industry, the service sector and public authorities. Founded in 1985 in Erlangen, Fraunhofer IIS has now 14 locations in 10 cities: Erlangen (headquarters), Nuremberg, Fürth, Dresden, further in Ilmenau, Bamberg, Waischenfeld, Würzburg, Deggendorf and Passau. 75 percent of the budget of 191 million euros a year is financed by contract research projects. Approximately 25 percent is subsidized by federal and state funds as well as internal projects of the Fraunhofer-Gesellschaft. Detailed information on: www.iis.fraunhofer.de/en
