CAVIAR wins the 2022 PENTA Innovation Award with image capture and transmission technologies that bring benefits to green and digital applications

Tied winner with the SunRISE project

Amsterdam, 25 November 2022- CAVIAR, a project within the EUREKA Penta Cluster managed by Industry Association AENEAS, was today presented with a PENTA Innovation Award during the EFECS2022 event. The CAVIAR (Cmos imAge sensor and VIdeo research) consortium developed image capture and transmission technologies relevant to numerous business applications. Many bring 'green' and/or digital benefits in areas including medicine, precision agriculture, TV broadcasting and automotive and mobile device use cases.

Project leader, Klaas Jan Damstra, Director of Research Development, Grass Valley Cameras, accepted the award on behalf of the nine consortium members – three SMEs, four large enterprises, and two Research and Technologies Organisations from France, Germany, Hungary, and the Netherlands.

The CAVIAR project set out to address the trends in image capture for professional applications towards higher spatial and temporal resolutions, wider color gamut, higher dynamic range (HDR), and improved image quality. Together, the partners developed and demonstrated technologies and building blocks for CMOS image sensors, video processing hardware and algorithms, video data reduction, and transmission.

The outcomes from CAVIAR included hardware demonstrators for four applications.

- **Precision agriculture:** based on improved sensor technologies in multi-spectral imaging, enabling image-guided operations that can help farmers feed the world in a more economic and environmentally friendly way.
- **Medical:** through a new color camera enabling faster scanning of histology slides for tissue analysis, supporting society's increasing need for more, better and faster patient diagnostics at a lower cost per diagnosis.
- **Automotive:** Near-Infrared Imaging technology for driver drowsiness detection and alarm that could also be helpful for facial recognition on mobile devices.
- **Broadcast TV:** a new live broadcast camera capable of capturing Ultra High Definition, HDR images at triple speed for slow motion replay – particularly relevant as demand for live events grows worldwide.

These CAVIAR demonstrators, and others such as high-resolution cameras for security drones, provide a basis for commercial products in the near future. Overall, the project has strengthened the position and competitiveness of Europe in the field of CMOS image sensors, cameras, and image processing. The PENTA Innovation award recognizes these successes and the strong collaboration among the CAVIAR consortium that has enabled them.
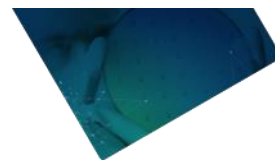
About the PENTA programme

PENTA is a EUREKA cluster whose purpose is to catalyse research, development and innovation in areas of micro and nanoelectronics enabled systems and applications. Guided by the Electronic Components & Systems (ECS) Strategic Research and Innovation Agenda (SRIA) four technology layers, four cross-sectional technologies, and six ECS key application areas, the PENTA programme enables the development of electronic solutions to help drive the digital economy through the formation of collaborative ecosystems along the ECS value chain. This creates the opportunity for rapid competitive exploitation and a strong impact on European societal challenges. PENTA supports SMEs, large corporations, research organisations, and universities to work together in project consortia by facilitating access to funding, fostering collaborative work , and creating consortia in areas of mutual industrial and National interest. PENTA is managed by the Industry Association AENEAS

More on PENTA: http://www.penta-eureka.eu
More on AENEAS: https://aeneas-office.org

About the CAVIAR project:

CAVIAR is a RD&I project consortium involving 9 partners. The project partners are: Grass Valley Nederland BV (Project Leader), 3DHISTECH, Adimec Advanced Image Systems BV, AMS Sensors, EVS Broadcast Equipment (Brussels, Liège), MsEyeTech, TNO (Netherlands) and Université de Bourgogne. The project is funded by Belgium, France, and the Netherlands.

CAVIAR website: www.caviar-project.eu

More on CAVIAR impact: https://penta-eureka.eu/wp-content/uploads/2022/10/PROJECT_IMPACT_CAVIAR_v2.pdf