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From photography to machine sensing, new applications are driving the adoption of disruptive CIS\(^1\) technologies

Status of the CIS Industry 2017 Report – Yole Développement

LYON, France – June 29, 2017: The mobile market segment, with its large volume and dedicated performances, remains the main application for CIS technologies. Not so far behind, security and automotive applications are also standing by such disruptive technologies to release products with attractive functionalities… Yole Développement (Yole) is announcing a US$11.6 billion market in 2016 with 10.5% CAGR\(^2\) between 2016 and 2022 in its Status of the CIS Industry report, 2017 edition. So what is the status of the CIS industry today? Sony is the undisputed leader with a comfortable 42% market share due to its key position in the mobile market segment. The competition is of course still open with both market segments, security and automotive that are showing new entrants. Photography remains the key applications currently served by new technologies such as the dual camera approach. Technology innovation is a strong aspect of the competition with new manufacturing techniques such as multi-stack and hybrid-stack…

Status of the CIS Industry report from Yole provides a clear understanding of CIS applications and related technologies. Under this new edition, Yole’s team is offering a detailed analysis of the CIS ecosystem with its latest technical innovations including an update focused on 3D stacking manufacturing, the emerging applications and the impact of the supply chain moves. It also reviews the automotive camera adoption curve and the evolution of the security camera application, both being the high growth applications identified by Yole’s analysts in the CIS report.

\(^1\) CIS: CMOS Image Sensor
\(^2\) CAGR: Compound Annual Growth Rate
Under the Status of the CMOS image sensor industry, 2017 edition Pierre Cambou, Activity Leader, Imaging at Yole and Jean-Luc Jaffard, formerly at STMicroelectronics and part of Red Belt Conseil pursued their investigation all year long and offer today their vision of this industry.

“Ten years down the line from the initial Apple iPhone inception that started the smartphone era”, explains Pierre Cambou. “Since then, CMOS imaging has benefited from huge market demand and a technology-driven environment. Photography and video are the main applications which have been totally transformed by new use cases, new devices and new technologies.”

“The mobile market is key for the CIS industry”, confirms Jean-Luc Jaffard. “Indeed, despite saturation in the number of handsets, the CIS market has been able to maintain a steady growth due to the introduction of dual, iris and 3D cameras. These additional cameras are changing the industry’s drivers from form factor and image quality to interactivity.”

Penetration into higher added-value markets such as automotive, security and medical shows that CIS products are transforming use cases across the board. CIS technology adoption allows greater automation levels at low cost, while using newly available computing architectures such as deep learning. The CMOS image sensor industry is currently in a virtuous circle where a new technology is providing true customer value.

Besides the transformation of current applications, new applications such as drone photography, biometric identification, and AR/VR3 are relying on CIS innovation. All these new applications are part of the story told in the 2017 Status of the CIS Industry report.

Pierre Cambou will present a snapshot of the CIS report, 2017 edition at Autosens 2017, taking place from September 19-21 in Brussels, Belgium. His presentation titled “Application, market and technology status of the automotive lidar” including several topics such as the lidar controversy, applications overview, market forecast and breakthrough technologies, will take place on Sep. 20 at 11:20 am.

Make sure you will be there to discover his presentation and exchange with him at Yole’s tabletop. To arrange a meeting, please contact: Clotilde Fabre.

A detailed description of this report is available on i-micronews.com, Imaging reports section.

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3 AR/VR: Augmented Reality/Virtual Reality
This report has been performed by Yole Développement (Yole) part of Yole Group of Companies. Companies cited in the database: Almalence, Ambarella, Apple, Agilent, Arm, Axis,ams Basler, Bosch, Brigates, BYD, Caeleste, Canon, Canon, Clairpixel, CMOSIS, Cognex, Continental, Core Photonics, CSEM, Dongbu HiTek, DVO, Dynamax, ESPROS Photonics, Evg, Excelitas Technologies, Fairchild Imaging, Flir, Forza Silicon, Fotonic, Foxconn, Fraunhofer, Fujitsu, Fujifilm, GalaxyCore, Given Imaging, GoPro, Grace Valley, Hamamatsu, Hasselblad, Heliotis, Himax Imaging, Honeywell, Hoya, HT, Huawei, Image Lab, IMEC, Infineon, Invisage, InvenSense, Kingpak, Konica Minolta, Lattice, Leap Motion, Leica, Lenovo, LFoundry, LG, Luxima, Magna, Mantis Vision, Medigus, Medelecis, Mesa Imaging, Micron, Microsoft, Mobileye, Mobotix, Movidius, New Imaging Technologies, Nikon, NXP, Nvidia, Odom Imaging, Omnivision…

Authors:
From 1999, Pierre Cambou has been part of the imaging industry. Pierre took several positions at Thomson TCS which became Atmel Grenoble in 2001 and e2v Semiconductors in 2006. In 2012 he founded a start-up called Vence Innovation (now Irlynx) in order to bring to market a disruptive infrared interaction technology. He has an Engineering degree from Université de Technologie de Compiègne Tech. More recently he graduated from Grenoble École de Management’s MBA. He joined Yole Développement as Imaging Activity Leader in 2014.

From 1996 to 1999, Jean-Luc Jaffard paved the way of imaging activity at STMicroelectronics being at the forefront of the emergence and growth of this business. At STMicroelectronics Imaging division he has been appointed Research Development and Innovation Director managing a large multidisciplinary and multicultural team and was later on promoted Deputy General Manager and Advanced Technology Director in charge of identifying, sourcing or developing the breakthrough Imaging Technologies and Applications to transform them into innovative and profitable products. In 2010 he was appointed STMicroelectronics Intellectual Property Business Unit Director. In 2014 he created the Technology and Innovation branch of Red Belt Conseil, to support High Tech actors like SME, Research Institutes, Start-ups, Analysts, Investors and public authorities. Jean-Luc Jaffard owns multiple patents in semiconductor and Imaging domains and has been invited speaker in many conferences worldwide. He studied Electronic and Microelectronics and has been graduated from École Supérieure d’Électricité of Paris in 1979.

Founded in 1998, Yole Développement has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole Développement group has expanded to include more than 50 collaborators worldwide covering MEMS, Compound Semiconductors, RF Electronics, Solid-state lighting, Displays, Image Sensors, Optoelectronics, Microfluidics & Medical, Advanced Packaging, Manufacturing, Nanomaterials, Power Electronics and Batteries & Energy Management. The “More than Moore” company Yole, along with its partners System Plus Consulting, PISEO, Blumorpho and KnowMade, support industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to grow their business.

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