

Keynote: Semiconductor Technology Accelerating Innovation and Industrial Productivity

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Abstract

The semiconductor industry was originally developed around mainframe computers in the 1970s and the 80's. In the 90's, the mobile phone and the Personal Computer became the driver applications and generated huge demands for silicon. Today, the world produces roughly 2 billion phones and smartphones and it is hard to imagine significant growth beyond these gigantic volumes. In this situation, we have identified the „Internet of Things“ (IoT) as the new wave for semiconductor growth with emerging applications like machine vision, virtual reality and automotive in the role to becoming the next big driver applications for the microelectronics industry.

Wednesday Keynote: Gerd Teepe: “Semiconductor Technology Accelerating Innovation and Industrial Productivity”

Today, the leading shrink path following Moore's Law is based on FinFET. Compared to bulk technology, FinFET shows significantly higher densities and performance data, but also adds significant complexity compared to planar technologies. High performance applications will use FinFET, but not all applications will be able to carry the cost associated to those complexities.

For the IoT and industrial market space, however, a new generation of semiconductor technology is required, which is characterized by significantly reduced power consumption, smaller chip sizes and a lower cost per transistor, combined with a much higher usage flexibility. For these applications GLOBALFOUNDRIES offers its 22FDX™-Technology, a planar, fully-depleted SOI-technology (FDSOI), with a roadmap into 12FDX™.

As the progress in semiconductors continues on a high pace, it remains the driver for industrial innovation at large. New applications like machine vision based on machine learning can only be realized with the latest semiconductor technology. Most of the productivity increases in industrial manufacturing are associated to the semiconductor progress our industry.

Curriculum Vitae



In his role as Director Marketing for Europe, Gerd Teepe is responsible for leading the CMOS Platforms marketing initiatives in this region. Prior to this, he was leading the Design Engineering Organization of GLOBALFOUNDRIES.

Gerd Teepe has been with GLOBALFOUNDRIES since its creation in 2009 and is based at the FAB1-site in Dresden. Prior, Gerd was with AMD, Motorola-Semiconductors, and NEC, Japan in R&D, Design, Product Management and Marketing roles. Gerd holds a Master's Degree and a PhD from Aachen University, Germany.