

Future Disruptions

Chipstainability - A Megatrend to Strengthen Europe's Leading Role for Global Collaborations

S. Wunderer
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Nokia Solution and Networks GmbH & Co. KG,
Ulm, Germany



Abstract

In times of geopolitical unrest, climate change as a global problem has to be tackled by closely collaboration with other nations. Europe should use its leading position in microelectronics sustainability to meet the needs of the present without compromising the ability of future generations. The example of ICT shows how strategic cooperation can be used to reduce energy consumption and embodied emissions in microelectronics. The future-oriented results of a recent IPCEI ME/CT Chipstainability Workshop are presented and discussed.

Biography

Stefan Wunderer is driving future topics in mobile communications since more than 40 years, mostly filling leading positions in network optimisation, customer support and training. Within Nokia, he is head of Nokia's IPCEI ME/CT chip design project in Ulm and Nürnberg and facilitating the RAN Energy Efficiency task force. Additionally, Stefan is lecturing sustainability at the University of Würzburg, leading an international SNS-JU research team for Social Needs and Value Creation as well as working within the Scientists for Future in Cologne. He is actively supporting the working group Women in Telecommunications and Research (WiTaR).

References

AI as a Catalyst: Transforming the Semiconductor Landscape Amid Geopolitical Shifts

B. Ernst
SVP, Head of Strategy and Transformation
Electronics
Merck Electronics KGaA, Darmstadt, Germany



Abstract

In an age where globalization has given way to a fragmented and unpredictable landscape, global companies face a new reality: navigating constant volatility and complexity. As organizations grapple with the intricacies of cost management, coordination, and strategic decision-making, they encounter both formidable challenges and exciting opportunities. At the forefront of this transformation is artificial intelligence (AI), a powerful catalyst driving innovation and reshaping geopolitical dynamics. AI not only propels advancements in the semiconductor industry but also accelerates the pace of innovation, bringing strong growth prospects for the semiconductor market and the European companies within this ecosystem.

In this keynote presentation, Benedikt Ernst, Head of Transformation and Strategy for the Electronics Business of Merck KGaA, Darmstadt, Germany, will provide insights into how the company is redefining its strategy through a dynamic "local to local" approach. This strategy encompasses diversifying markets, reinventing research and development, and restructuring supply chains. Benedikt will discuss how the company is capitalizing on AI opportunities through digital transformation, which accelerates advancements in semiconductor materials to keep pace with the rapid growth of AI. He will also highlight the importance of decades of ecosystem collaboration in building the semiconductor industry. Furthermore, Benedikt will explore how the European ecosystem is uniquely positioned to gain a competitive edge in the AI era, demonstrating that through collaboration, we can thrive even amidst prevailing geopolitical tensions.

Biography

Benedikt Ernst is the Senior Vice President and Head of Strategy and Transformation at the Electronics business of Merck KGaA, Darmstadt, Germany. As a member of the Electronics Executive Committee, he is responsible for the end-to-end strategic development and transformation of the business sector, encompassing market competitive intelligence, strategic roadmap, business transformation programs, and business and portfolio development. He joined Merck KGaA, Darmstadt, Germany in 2006, and has had various management positions. Since 2018, he has been heading Strategy and Business Development for Electronics and Semiconductor. Before he was Commercial Director for the Semiconductor business and Head of Packaging Business Field. Benedikt Ernst studied physics at the Technical University of Munich and at the Max Planck Institute of Plasma Physics.

References

Challenges in AI Chip Design

O. Temam
Director
Google, GDM, Paris, France

Abstract

We will go over some of the key challenges that we are facing designing chips for AI. We will particularly focus on one challenge: the massive velocity gap between the pace at which we (in Google and as an industry) are developing chips for AI, and the pace at which AI algorithms evolve. We will illustrate this challenge with a few examples gathered over actual production chip designs.

Biography

Olivier was initially an academic researcher at Inria (France), leading a team on computer architecture, especially accelerators for AI. As Google was ramping up its TPU effort in 2013, it noticed that research work, and Olivier ended up co-leading or leading several of the AI chip production efforts at Google from 2014 to 2019. Since 2019, he has been a Director at Google DeepMind working on automatically designing chips using AI, and scaling up Google AI data center infrastructure.

References

The Role of Time Critical Logistics in Complex Global Supply Chains

R. Schoenzetter
Global Head of Business Unit High Tech &
Semicon
time:matters GmbH, Neu-Isenburg, Germany



Abstract

As semiconductor supply chains stretch across continents and rely on tightly sequenced production flows, even minor delays can lead to significant disruptions. In a world impacted by geopolitical shifts, supply shortages, and accelerating innovation cycles, the ability to respond quickly is no longer optional - it's a strategic necessity.

In this session, **Remy Schoenzetter**, Head of the Business Unit High Tech & Semicon at **time:matters**, explores the critical role of agile, time-sensitive logistics in securing continuity and responsiveness across the semiconductor value chain. Drawing on global experience in supporting semiconductor manufacturers and equipment suppliers, he will outline how time-critical networks, courier terminals, and 24/7 operational control are becoming increasingly important.

This talk offers a strategic perspective on how companies can rethink urgency, resilience, and agility - transforming logistics from a cost driver into a competitive edge.

Biography

Remy Schoenzetter is the Global Head of the High Tech & Semicon Business Unit at time:matters, a logistics service provider specializing in time-critical logistics.

With over a decade of experience in supply chain management, air freight, and freight forwarding, Remy brings a pragmatic, hands-on perspective to complex logistical challenges.

His career spans various roles across different logistical networks, including leadership positions in operations, customer service, and strategic partner management. Prior to his current role, Remy served as Head of Operations Western Europe, where he oversaw a team of logistics experts and led transformative initiatives across the region.

He is known for connecting cross-functional teams and translating customer urgency into solutions that drive performance and resilience.

Remy holds a Master's degree in Finance, complemented by certifications in Lean, Agile, and professional coaching. He combines analytical thinking with a people-centered leadership style, and currently contributes to the SEMI Supply Chain Initiative as a strategic partner.

References

Sustainability at NY CREATES. Addressing the most critical sustainability areas for responsible and sustainable semiconductor industry innovations.

F. Tolic
Director of Business Development
New York CREATES, Business Development,
Albany, United States of America



Abstract

With the recent resurgence of the semiconductor chip industry across the globe, and expansion of new fabrication facilities in North America, Europe, and Asia, the semiconductor industry is now poised to become the central global economic driver. Estimates have growth exceeding \$1 trillion by 2030 and \$2 trillion by 2040. As the global demand increases for new technologies like AI, 5G, Quantum, and IoT, the industry must now be cognizant of the impact of our industry on the environment. There must be an established purpose beyond profits, losses, capacity, and demand to address this now realistic problem. Creating a future semiconductor industry focused on responsible and sustainable innovations is now at the forefront of many semiconductor organizations. NY CREATES is driving the establishment of a Sustainability Test Bed Program that addresses capabilities in the most critical sustainability areas for semiconductor Industry. We will present the program and the successful partnerships like SEMI's Semiconductor Climate Consortium, and many other sustainability organizations. Having the most advanced shared 300mm Semiconductor Research and Development facility in the world, NY CREATES is now positioned to address this critical global need alongside the important partners in our ecosystem in addition to all our other research efforts.

Biography

Frank Tolic leads the Business Development efforts at NY CREATES. He is a technology executive with 30+ years of semiconductor experience in engineering and business related programs focused on research & development, strategic planning, marketing, sales, and product management.

He has managed portfolios of over \$1 Billion in business across the globe in support of semiconductor research, equipment, consumable, and technology companies, and has worked in number of commercial semiconductor research organizations as well as consortia and academia such as; Motorola, SEMATECH, Albany Nanotech, AIM Photonics and currently NY CREATES.

References

Environmental Responsibility & EHS Strategies at GlobalFoundries

T. Clarius
Director EHS&S
Globalfoundries, EHS&S, Dresden, Germany

Abstract

Coming Soon

Biography

Coming Soon

References

AI × AR: Turning Chips into Everyday Experiences

S. Marx
Co-founder and CEO
ZAUBAR, Berlin, Germany



Abstract

This talk makes a simple promise: the next disruption is how AI feels in the real world. With powerful new chips and sensors, AI is moving from screens to *spatial agents*, assistants that understand a scene and respond with bite-size guidance, comparisons, and media on phones, tablets, and emerging glasses. No special hardware is required. The talk presents a practical pattern any team can adopt now: image or scene inputs feed domain knowledge with privacy guardrails and produce concise outputs that people actually use. The result is faster understanding, clearer buying decisions, and better journeys across factories, events, retail, culture, and education. Hardware makes it possible. Spatial software makes it adopted. The session focuses on adoption, usability, GDPR, and accessibility as the missing layer that turns semiconductor innovation into business impact.

Biography

Stefan Marx is a serial entrepreneur and XR enthusiast. He studied Philosophy of Technology at TU Berlin and Design Thinking at the Hasso Plattner Institute. He's been part of the Berlin tech startup scene for nearly ten years. As a co-founder and product developer of Viorama, an AR/VR startup, he and his team sold their AI technology in 2018. For his second venture, Splash, Stefan and his co-founders raised €2.5 million in the seed round after winning the SXSW Startup Competition. Currently, as CEO of ZAUBAR, Stefan helps businesses and cultural institutions create immersive, location-based experiences using AI and AR technologies. His vision is "AR on every street, outside every home." He specializes in innovative product development, interface design, and game engine programming.

References

Memory challenges and solutions in the age of AI

M. Brox
Fellow
Micron Semiconductor, Munich, Germany



Abstract

Memory used to be outside the spotlight of semiconductors. CPUs or GPUs caught most of the attention while memory was seen as the readily available place to store your data. This situation has drastically changed. We are in the middle of a revolution providing ever more complex artificial intelligence applications. These applications are demanding massive compute power and will run idle unless fed by ever faster and ever more memory.

The memory industry is tasked to solve these challenges with Micron leading this transformation. Hyperscale computing centers operate with millions of DRAM components where each fail can halt or bring down long-running calculations.

This talk will discuss challenges modern memories are facing and present answers Micron has implemented to improve RAS (reliability, availability and serviceability). We will put special focus on the subset of graphics-DRAMs whose innovations have been driven out of Micron's Development Center in Munich. Besides powering game consoles and graphics cards, graphics memory has been the enabler for the AI revolution we are witnessing today and is tasked to help keep AI affordable.

Biography

Martin started his career in the DRAM industry in the three-continental IBM/Siemens/Toshiba memory development alliance at the IBM-site in Burlington/VT (USA). After returning to Germany, he led DRAM developments stretching across conventional server-class memory, high speed Rambus DRAM before settling into multiple generations of graphics-DRAM.

He is a Fellow at Micron's design center in Munich and is holding Diploma and Dr. degrees in Physics. He is or was a member of the program committees of leading semiconductor conferences (ISSCC, VLSI symposium, ESSCIRC, ESSERC). For a series of publications on reliability of semiconductor circuits he has been awarded the ITG award of the VDE and is holding more than one hundred US patents.

References

Strengthening Semiconductor Supply Chains in an Era of Disruption

B. O'Dowd

Head of Global Business Development Semicon
Kuehne+Nagel, Business Development, Dublin,
Ireland



Abstract

In this session, Barry O'Dowd, Head of Global Business Development Semicon, at Kuehne+Nagel, will explore the key risks facing semiconductor logistics and how companies can proactively mitigate them. He will introduce practical strategies for assessing and strengthening transportation resilience by drawing from real-world examples and lessons learned from industries with highly complex supply chains.

Attendees will gain insights into:

- How the semiconductor industry is adapting to global disruptions and reshoring trends
- The role of data-driven risk mitigation tools in evaluating transportation lanes
- Best practices for securing critical shipments, from wafer fabrication materials to capital equipment
- The importance of continuous risk assessment in an evolving supply chain landscape

With decades of experience optimising Semicon logistics, Barry will share how industry leaders can turn supply chain resilience into a competitive advantage, ensuring stability, security, and seamless operations in a rapidly changing world.

Biography

Based in Dublin, Ireland, Barry brings more than 30 years of international logistics expertise. In his current role, Barry leads strategic growth and innovation within the company's semiconductor logistics segment—one of the key focus areas under Kuehne+Nagel's global Roadmap 2026 strategy. Recognizing the industry's unique supply chain demands, he has been instrumental in developing SemiconChain—a dedicated, quality-certified network now spanning more than 35 locations across major semiconductor hubs.

References