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24th April 2023
04:00 PM CET – 06:00 PM CET

Geopolitical, social and economic challenges in the semiconductor industry - How to secure the future ?

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Geopolitical, social and economic challenges in the semiconductor industry - How to secure the future ?

PROGRAM

24th April 2023/04:00 CET – 06:00 CET

Introduction/Simon Jacob/COM SIT: 5 minutes

Chapter 1	• Prof. Raymond Blanton/UIW:	• 15 Minutes
Chapter 2	• Michael Ryan/S&P GLOBAL: • Firas Modad/Modad Geopolitics:	• 15 Minutes • 15 Minutes
Chapter 3	• Chanda Saika/IBM: • Tamás Kubicsek/IBM:	• 5 Minutes • 10 Minutes
Chapter 3	• Manoj Tharian/Microgenesis: • Dhanajaya K/Microgenesis:	• 5 Minutes • 10 Minutes
Chapter 3	• Christian Meier/COM SIT: • Müzeyyen Carassco-Demir/COM SIT:	• 5 Minutes • 10 Minutes

Question and answer session: 30 Minutes

PROGRAM

Chapter	1	Influence of modern technologies on society
Chapter	2	Latest insights into the geopolitical impact of the semiconductor industry
Chapter	3	Upcycling & resource optimization within the supply chains for electronic components

BRIEFING

In collaboration with various partners from the fields of research, geopolitics, software development and component sourcing, our speakers examine past and current developments to gain a better understanding of the impact of chip-based high technology on the cultural, political and economic situation of open democracies. This is followed by approaches to solutions aimed at making supply chains more independent, reducing costs, saving CO2 emissions, energy and raw materials and, above all, operating more sustainably. The speakers are all absolute experts in their field and offer insights into a world that is unique and extremely valuable, especially against the backdrop of hybrid conflicts.

CONTENT

MICROPROCESSORS

On November 15, 1971, more than 50 years ago, the U.S. company Intel introduced the "Intel 4004," one of the first programmable microprocessors, marking the beginning of the digital revolution. An era of exponential growth following the rise of the Internet, which thoroughly changed the world in terms of society, culture and, above all, the economy within a very short period of time. Processors, semiconductors, chips, as well as other components of electrical engineering, form the basis in several significant sectors of our existing economy. The world as we know it today could no longer exist without diodes, transistors, capacitors, sensors or even processors, the so-called CPU. Another important component, indispensable for electronic devices, is the software. After all, it is the interaction between a processor and programs that breathes new life into the digital world and creates, for example, "artificial intelligence". It is precisely for these two resources, hardware and software, that a global conflict has arisen that is dividing the world into a bipolar technology leadership and forcing it to look more intensively at geopolitical aspects. It is predictable that rival states that are in direct rivalry...

CONTENT

with democracy will try to gain sovereignty over related resources to pressure the Western-liberal world. Shortages of essential components, sometimes artificially created and used as a weapon, are causing devastating damage to all economies. Both the Covid pandemic and the Russian-Ukrainian war intensified the situation immensely and led to temporary production shutdowns. The overall tense situation in supply chains has forced and continues to force companies to become more flexible in order to obtain components; with the result that potentials are being leveraged that previously existed without attracting attention. The current situation is changing dramatically, leading to a win-win situation for the western world and the environment in particular. Topics such as “upcycling”and “resource optimization” play an important role in this process.

CHAPTER 1

INFLUENCE OF MODERN TECHNOLOGIES ON SOCIETY

Algorithms, cloud systems, and artificial intelligence have created a new presence in our world that is growing exponentially, mingling with traditional art and having the potential to reconcile or reverse science and religion - to unite or divide. Both are possible, and we can observe both at present when we look at political disputes or the rise of conspiracy theories in the media. Technology, used logically and in the service of man, brings immense benefits to the world and allows individuals, in the spirit of free development, to create technological, artistic and philosophical wonders. Be it a beautiful painting that captivates us, an algorithm that helps us analyze data, or both in combination, when suddenly an AI begins to create images that touch us emotionally. In any case, it is the result of a mind that possesses imagination and exists initially out of pure creative fantasy in our thoughts or extended by a virtual space in our mental "I." An "I" that is brought to digital life with the help of technology. ...

CHAPTER 1

The challenge we face is in the way we use technology. Once driven by the U.S. government's military missile program, processors were developed primarily for military applications. They soon found civilian applications, such as those of world-renowned Fairchild and Intel (co-founders of microelectronics), and have had an immense impact on our lives. Without processors, computer chips and semiconductors, our world today, as it functions, could not exist. Personal computers, smartphones and artificial intelligence have changed our lives and humanity. In particular, social media, which influences entire societies and triggers conflicts, would be unthinkable without semiconductors, which are in every smartphone.

With Dr. Raymond Blanton, assistant professor at the prestigious University of the Incarnate Word in San Antonio, Texas, where he teaches undergraduate courses in public rhetoric, business communication, communication technology and media ethics, we will take a closer look at the impact of technological developments, especially in the context of ever-increasing computing power.

CHAPTER 2

LATEST INSIGHTS INTO THE GEOPOLITICAL IMPACT OF THE SEMICONDUCTOR INDUSTRY

NASA's moon program was the starting point for the US chip manufacturer Fairchild Semiconductor to pave the way for the mass production of the so-called "ICs" - integrated circuits, or better known as "chips". Without the new technology developed in Silicon Valley, which made computers more powerful, compact and affordable, the U.S. would not have made it to the moon in such a short time. Texas Instrument, another U.S. chip giant, followed suit, supplying the Air Force's Minuteman missile program in the early 1960s with thousands of chips produced in its own U.S. factories. America, as a motherland of digitalization, with its famous Silicon Valley and beyond, marked a historical epoch in human history.

Today, with hybrid conflicts, cyber-attacks, and production bottlenecks, the world must admit that to sustain the global economy, but also to win conflicts, it must keep control of the essential development and production processes of the semiconductor industry.

CHAPTER 2

LATEST INSIGHTS INTO THE GEOPOLITICAL IMPACT OF THE SEMICONDUCTOR INDUSTRY

Global companies control essential elements of digitalization. It is not oil, nor the flood of data generated today, that is the vital currency that defines the technological continuity, and therefore the political development, of society. It is computing power that matters, and without semiconductors, the innovations that are changing the world cannot be driven. Whether it's artificial intelligence, autonomous driving, or the autonomous actions of a drone in warfare. It all depends on a product that is being fought over for technological leadership around the world.

Together with the experienced analysts Michael Ryan (S&P – Global Market Intelligence) and Firas Modad (Modad Geopolitics – Middle East & Geopolitical Expert), we would like to shed light on the relevant geopolitical aspects of the semiconductor industry in the first part of our debate, before substantive approaches to solutions shape the exchange in the second part.

CHAPTER 3

UPCYCLING & RESOURCE OPTIMIZATION WITHIN THE SUPPLY CHAINS FOR ELECTRONIC COMPONENTS

Meanwhile, global players, e.g., the IT and entertainment industries, are encouraging customers to return their used smartphones in order to use the components that have been collected from them, after they have undergone an "upcycling process," in new devices and feed these back into the economic cycle. Not only does this result in a saving of essential raw materials that would otherwise have to be processed and produced at great expense in terms of energy and logistics. Also, the environment profits, since CO^2 – emissions can be reduced by “Upcycling”.

1. **Resource optimization**

Another way of breaking free from dependence on suppliers from authoritarian regions is to distribute existing potential, such as actual physical quantities of components in the Western world, more effectively and utilize them with greater intensity and for longer periods of time in coordination with an intelligent network. Components have an expiry date, too, similar to the food industry, although they do so following …

CHAPTER 3

UPCYCLING & RESOURCE OPTIMIZATION WITHIN THE SUPPLY CHAINS FOR ELECTRONIC COMPONENTS

...a time window of many years. However, given that even components that have lingered longer in a producer's warehouse somewhere are still usable, as long as:

1. the suitable buyer is being found for it

2. the quality of the components matches expectations, something that can be guaranteed by state-of-the-art test procedures.

When it comes to saving raw materials, energy, logistics costs and CO^2, the opportunities are huge.

Both ways, "Upcycling and resource optimization", offer undreamed of value creation opportunities in order to gradually liberate oneself from dependencies, to preserve resources and to protect our environment.

In cooperation with MICROGENESIS and IBM, COM SIT introduces solutions that demonstrate the potential within the hardware and software fields and define the approaches to move forward with partners towards a “Green Future” in the world of electronic components.

SPEAKERS

24TH APRIL 2023

04:00 PM CET – 06:00 PM CET

Geopolitical, social and economic challenges in the semiconductor industry - How to secure the future ?

KEY POINTS

MODERATION COM SIT: SIMON JACOB

Head of Business Development - Marketing & Technology

SIMON JACOB/COM SIT

S.JACOB@COM-SIT.COM

Located: Germany, Munich

Operations and project management specialist with more than 20 years of experience in coordinating and implementing sales and marketing strategies for various companies in the IT and electrical engineering industries. Several years of experience as a media consultant and producer working with public service media, renowned publishers and government organizations in Europe, the Middle East and the USA. Founded companies in the fields of information technology, consumer electronics and consulting. Several years as a journalist specializing in: Geopolitics, technological and media developments, socio-cultural relations in the Middle East.

CHAPTER 1

RAYMOND BLANTON/M. DIV., PH.D
RLBLANTO@UIWTX.EDU

REFERENT: PROF. RAYMOND BLANTON, UIW

Associate Professor at the prestigious University of the Incarnate Word in San Antonio, Texas - public rhetoric, organizational communication and leadership, media ethics, aesthetics, theology and religion, and civic engagement

Located: USA, Texas, San Antonio

With the current state of artificial intelligence-based systems, digitization is reaching a new epochal peak that is changing all of our lives. The associated influence on society, politics and the development of young people can and does lead to massive conflicts, triggered by the unfiltered flood of information in social media. Many consumers who have grown up with social media lack the sensitivity to deal with it and the ability to distinguish between truth and fake. The semiconductor technology that underlies all this is both a blessing and a curse and, if controlled by the wrong people, can cause great harm, especially in Western societies. To counter this, we need a counter-strategy that creates “holy spaces" where we can spend time without digital consumption.

CHAPTER 2

FIRAS MODAD/MODAD GEOPOLITICS
FIRAS@MODADGEOPOLITICS.COM

REFERENT: FIRAS MODAD, MODAD GEOPOLITICS

Firas Modad (Modad Geopolitics) is a Middle East and geopolitics expert. He specialises in the conflict between Iran, Turkey and Saudi Arabia; the geopolitical confrontation between the US-led camp and the Chinese-Russian axis; and the emergence of a new non-aligned bloc. He has worked extensively with industry leaders in the insurance, energy and security sectors.

Located: United Kingdom, Oxford

The confrontation between the US, Europe and Japan on the one side and Russia, China and Iran on the other seems set to dominate the next decade, if not the next century. This confrontation is taking both an economic and military dimension. Economically, both the US and China are seeking to clear their military supply chains of the other side's influence, and perhaps to disentangle their economies more broadly. Militarily, China is engaged in a build up aimed at giving it the option of taking Taiwan militarily, while the US is building alliances such as the Quad (US, India, Japan and Australia) and AUKUS (Australia, UK, US) intended to contain China's rise. This alliance building is reminiscent of the pre-WWI era, and risks escalating similarly. Corporate strategists need to be aware of this conflict, and its various escalation pathways, to manage the adverse impacts on their businesses.

CHAPTER 2

MIKE RYAN/S&P GLOBAL
MICHAEL.RYAN@SPGLOBAL.COM

REFERENT: MIKE RYAN, ECONOMICS DIRECTOR, INDUSTRY INSIGHTS, S&P GLOBAL MARKET INTELLIGENCE

Mike partners with a wide range of leaders in business, finance, and government to strategically analyze industry investment opportunities through the application of advanced analytics. He has extensive experience helping businesses scale their market intelligence, forecasting, and performance benchmarking capabilities. Mike manages the company's Sector Risk service, used by financial clients as an 'early warning radar' to monitor and mitigate credit risk exposure. He is a recognized thought leader and prolific public speaker at international industry events.

Located: USA, Arizona, Scottsdale

Heightened geopolitical tensions and pandemic-related shocks have amplified focus on building resilient supply chains, particularly within the technological sphere. Reshoring semiconductor capabilities will require smart industrial organization, skilled labor, and significant resources. Policy makers and corporate strategists will need to carefully weigh the fundamental tension between efficiency and security in this defining decade.

CHAPTER 3

CHANDA SAIKIA/IBM

CHANDAMITRA.SAIKIA@IBM.COM

REFERENT: CHANDA SAIKIA, SENIOR SUSTAINIBILITY PARTNER SPECIALIST, IBM TECHNOLOGY

Chanda is a brand partner specialist at Sustainability Software group of IBM Svenska She comes with more than a decade of experience in IT industry. Being a trusted advisor, she is specialized in providing solutions to her clients from industries such as Medtech, Automotive, Aerospace, Defense, infrastructure and Transportation to speedup innovations, reduce complexity and improve quality using IBM cutting edge technologies such as IBM Engineering Lifecycle Management, IBM Envizi Solution and more.

Located: Located: Sweden

Content description:

Envizi is a powerful tool that helps companies meet ESG requirements by consolidating, analyzing and logging processes. The experienced IT specialist, who works in IBM's sustainability software department, explains the development of the software and the associated goals.

CHAPTER 3

TAMAS KUBICSEK/IBM
TAMAS.KUBICSEK@HU.IBM.COM

REFERENT: TAMÁS KUBICSEK, IBM ENVIZI GROWTH LEADER, NCEE

Tamas Kubicsek is an IBM Sustainability evangelist with more than 15+ years' of experience helping customers in their digitalization journey around Enterprise Asset Management, Intelligent Supply chain and ESG reporting solutions.

Located: Sweden

Content description:
Tamas works closely with clients in North and Central Eastern Europe to develop solutions in the following areas.

- ESG/GHG reporting/accounting/performance management
- Smart supply chain and B2B collaboration solutions

with the aim of increasing business efficiency and reducing costs. Smart solutions, such as IBM's 'Envizi' tool, are key enablers for building the foundation of a sustainability journey. In his presentation, Tamas will take an in-depth look at the functionality of the software (Envizi) in order to demonstrate how organizations can build an ESG data platform, automate their data capture, orchestrate the workflow of Sustainability reporting and disclosure and to manage their programs towards decarbonization.

CHAPTER 3

MANOJ THARIAN/MICROGENESIS

MANOJ@MGTECHSOFT.COM

REFERENT: MANOJ THARIAN , CEO FOUNDER & CEO MICROGENESIS

Manoj Tharian founded MicroGenesis TechSoft, a technology service company in the year 2000. Thereafter began a journey of almost two decades with an aspiration to make MicroGenesis TechSoft a global name. His exposure in the field of technology and his experience in industrial settings led him to leverage this technological expertise in the form of enterprise software solutions to optimize business efficiency as well as cost-efficiency.

Located: India,Karnataka, Bangalore

Content description:

Presents the Microgenesis company and past as well as current developments. Especially in connection with IBM Envizi, Sweden.

CHAPTER 3

DHANANJAYA K/MICROGENESIS
DHANANJAYA@MGTECHSOFT.COM

REFERENT: DHANANJAYA KALIDAS, MICROGENESIS, VICE PRESIDENT MICROGENESIS

Dhananjaya is the Vice President of Global Delivery at MicroGenesis. He leads a team of IT Specialists in mentoring and consulting to clients in the area of ELM, ESG reporting and Systems Engineering.

Located: India,Karnataka, Bangalore

Content description:

The top executive has more than 23 years of experience in the automotive, aerospace, defense, healthcare, transportation, and IT industries and has held a variety of roles and responsibilities supporting various software and systems development teams. A particular focus of his work has been the implementation of high quality ELM (Engineering Lifecycle Management) and sustainability software solutions with the goal of reducing complexity within systems while ensuring compliance with all regulations and frameworks. Using IBM Envizi, of which Microgenesis is a collaborative partner, he will explain how ESG (Environmental, Social, Governance Advisory) requirements can be met and robust operational processes implemented.

CHAPTER 3

CHRISTIAN MEIER/COM SIT

C.MEIER@COM-SIT.COM

REFERENT: CHRISTIAN MEIER, CEO COM SIT

Christian Meier is a company founder with over 30 years of experience in the semiconductor industry. Together with his business partners, he has built one of Europe's largest specialists for procurement, maximum recycling and remarketing of electronic components, especially microprocessors. COM SIT now has locations in the U.S., Europe, and Asia.

Located: Germany, Bavaria, Munich

The experienced entrepreneur, who has an excellent global network of key players in the automotive, industrial production, communications, medical care, etc. sectors, outlines the development of the company and the associated goals. In particular regarding the savings potentials that help the electrotechnical industry to reduce costs, operate more efficiently, save resources and operate more sustainably by using powerful software tools.

CHAPTER 3

MÜZEYYEN CARRASCO/COM SIT
M.CARRASCO@COM-SIT.COM

REFERENT: MÜZEYYEN CARRASCO-DEMIR , CEO COM SIT

Müzeyyen Carrasco Demir is an entrepreneur and one of the few managers with such deep insight into the electronics industry supply chain. Well networked with top decision makers worldwide and with more than 28 years of experience, she and her partners have built one of Europe's largest specialists for procurement, recycling and remarketing of electronic components, especially microprocessors.

Located: Germany, Bavaria, Munich

In her presentation, the experienced manager, who operates in a still male-dominated sector, addresses the specifics of component procurement in an increasingly complex world of electrical engineering. In this context, she points out possibilities and ways how capacities can be used more efficiently. Associated is the goal of becoming more independent in order to be able to maintain production in critical situations. The range of effects of sustainable management helps to reduce costs, safeguard production and save raw materials, something that should be part of a corporate policy geared to sustainability and environmental protection. In connection with localization, procurement and recycling, efficient software tools and customer- and supplier-optimized service offerings play a central role, which Müzeyyen Carrasco will discuss in detail.

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