WARDS100

THIS MONTH IN AUTOTECH

FEATURED INTERVIEW:

“THIS IS ONE OF THE MOST EXCITING TECHNOLOGY AREAS TO WORK IN”

with

Johannes M. Biermann,
President & COO, aicas GmbH

TESLA MISS EXPECTATIONS

Posted its slowest growth in three years in 2023

CES TECH TRENDS

Software-defined vehicles were all the rage

EV CONFIDENCE SLACKENS

Investment in gas-electric hybrids jumps to second place

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AN INTERVIEW WITH JOHANNES M. BIERMANN, PRESIDENT & COO, AICAS GMBH

WardsAuto speaks with Johannes M. Biermann, President & COO, aicas GmbH, on his automotive tehcnology career.

Wards: Could you introduce yourself, and describe your career history to date?

JMB: In my current role as President & COO of aicas, I lead the company's strategy and oversee its operational execution. During my 30-year international career, I have gained experience in a variety of global organizations, including industry leaders such as Siemens and HP/HPE, as well as smaller companies such as aicas. Throughout my journey, my focus has always been on understanding and capturing evolving market dynamics and customer needs, and translating them into actionable measures that drive financial results.

Wards: What is your proudest achievement at aicas so far, and are there any difficulties/ obstacles you've faced? How did you overcome them?

JMB: It is great to work every day with a highly motivated and agile team of business leaders and technical experts with diverse backgrounds from some 15 nations. I am particularly proud of the fact that over the past few years we have made aicas the global partner for software in the car, with an attractive edge-to-cloud portfolio in the automotive segment and use cases ranging from efficiency plays, to global scalability of software deployments, to enabling the rapidly evolving AI ecosystem aimed at accelerating the capture of insights from vehicle and vehicle usage data. Even during the pandemic, we were able to maintain our valuable employee base while investing in innovative products with our local funding partners in Karlsruhe, Germany. It was a real balancing act, but one that is now paying off.

Wards: aicas creates, deploys, and operates edge-to-cloud solutions for the automotive industry. What is the future of cloud processing in automotive, and how will this advance CASE (Connected, Autonomous, Shared, Electric)?

JMB: For example, cloud capabilities will help accelerate use cases such as automotive testing by leveraging scalable off-premise capabilities. The advancement of AI-driven technologies for a variety of use cases, such as improving the user experience in vehicles, expanding monetization opportunities, and creating better and higher quality products, will rely on cloud processing at scale. Autonomous systems will learn from the availability of data points at scale across cloud-based technology ecosystems and applications.

Wards: You've partnered with industry leading names such as AWS, Google, NXP and Bosch. Operating in a traditionally siloed industry, how do you see the future for partnerships in automotive technology? Are there any challenges you've faced or opportunities you've noticed from partnerships?

JMB: Partnerships have been, are, and will continue to be the key to better automotive technologies. No single company will be able to provide the full stack of technology options and benchmark capabilities. This is evidenced by the various in-house vs. mixed in-house and outsourced approaches among OEMs. Automotive OEMs have always relied on strong partners to bring together different products and solutions. This will continue, while from aicas' perspective as a software company, there will be a growing and direct interaction with technology teams in the automotive companies, in addition to remaining connected to other suppliers. Working horizontally will drive best-in-breed joint solutions that better serve global automotive companies and provide them with the assurance that the combinations needed to run the software-defined vehicle of the future will leverage the best technologies and capabilities. Working in partnership requires transparency about each other's objectives to achieve win-win situations. This is never static and therefore requires close interaction and integration and multiple levels, especially with large partners, from business management to technology functions and along peer levels.

Wards: Where do you see the industry heading? Are there any trends or developments we should be keeping an eye on?

JMB: Increased use of commercial offerings rather than in-house to gain competitive speed and faster access to the most efficient and profitable technology stack in the vehicle.

Also, increased and pervasive use of AI in both automotive manufacturing and vehicle-to-customer operations from sales to after-sales, including dealerships. Data extraction and processing technologies will enable faster deployment of AI methods and tools as they rely on the scale of observations. Improving the operational time to production of a vehicle line by leveraging both edge and cloud capabilities will be a key focus in the intensified race to transform from ICE to EV and more and more autonomous automotive systems.

Wards: And finally, what advice would you give to a young person looking to pursue a career in automotive technology?

JMB: Be willing to take risks, move fast, and enter with the understanding that this is one of the most exciting technology areas to work in for the next decade or more. Focus on the combination of building both technical expertise and business acumen, as both will be required to succeed in an area where the technological complexity of a vehicle, measured in parts, will be reduced, but the value will increasingly come from profitable vehicle platforms and the ability to leverage the software and data content associated with the vehicle to drive better business outcomes from fleet managers to individual consumers and - EV and its charging capacity is key here - entire national infrastructures.

aicas is a premier provider of embedded software solutions that removes the uncertainty in operating business models and processes across cloud and edge infrastructures. Our solutions assist customers to keep their assets operational in realtime. They can rest easy as their assets and operations are aligned to the speed and flexibility of their markets. Companies get to monetize data as the logic is deployed with faster time-to-market to shape desired business outcomes.

AN INTERVIEW WITH CHIH-MING HSIEH, SOFTWARE ENGINEER, AICAS GMBH

Wards: Could you introduce yourself, and outline some of the products/ features you're currently developing?

Chih-Ming: I have been working in software development for my whole career, mainly focusing on embedded system and wireless communication. As a witness to the technology trend of connected devices, I have seen things get smarter and smarter while getting smaller and smaller. It's fascinating to see how all the functionality of a feature phone 20 years ago has been integrated into a communications SoC (System on Chip) with all the capabilities we never dreamed of in a high-end computer. Yet the goal remains the same: to be connected, but more. More devices, more data, and connected everywhere. This is exactly the profile of connected vehicles that I am currently working on. As in-vehicle data becomes more valuable to the industry, we are developing a telematics solution for automotive OEMs. To address the complexity of integrating different subsystems within the vehicle network, we are providing an application runtime environment that is portable and flexible. More importantly, it meets the security and real-time requirements that are critical for an automotive system.

Wards: Are there any challenges you face in your day-to-day role, and how do you overcome them?

Chih-Ming: Working at the frontier of customer collaboration, it is important to bridge the needs of both sides. It is a challenge to translate the requirement coming from the customer because a requirement can come from many aspects: technical, commercial, or even political. How to convey the customer's input to our team without losing the important context is the key to a successful project. To achieve this, I always try to put myself in their shoes and see things through their eyes. The technical capabilities, the climate between the teams, and the success defined by both organizations are the factors to consider.

Wards: What do you find to be the most exciting aspect of your role?

Chih-Ming: Technology is definitely my favorite part. Working with the top companies brings opportunities to access the latest technologies, cutting-edge equipment and services on a large scale. It inspires me even more when I talk to the customers who bring brilliant thoughts to the design of the systems. Problem solving requires insight into the subsystems involved. Sometimes the key information is not easily accessible, even to the owner of the systems. My role is to help my customers understand their own system better while learning about the capabilities of our products through the solution finding process. It is exciting to finally have all the pieces of the puzzle in place.

Wards: Why is now a great time to be working in AutoTech?

Chih-Ming: The automotive industry is undergoing revolutionary changes that are coming from different angles, from the heart, brain and nerve of vehicles. This means fundamental changes in the entire ecosystem from supply chain to manufacturing. Software technology itself is also evolving rapidly. With this in mind, it is clear that the industry needs an information hub where the latest information can be shared broadly across the spectrum of participants. I believe AutoTech provides that forum for the industry.

Wards: Where do you see the industry heading? Are there any trends or developments we should be keeping an eye on?

Chih-Ming: We have seen the revolution in the mobile industry, where a mobile device has gone from being just a communication device to a magic wand in our hands. The same trend is happening in the automotive industry. Only this time it will be not only our ears and eyes, but also our legs and feet. As the brain of the car gets bigger and bigger, we will need a more sophisticated environment to develop and train it. AI technology will definitely become the core of everything, whether it is used for autonomous driving or predictive maintenance. A flexible edge runtime that is seamlessly integrated into the DevOp infrastructure should significantly reduce the turnaround time.

Wards: And finally, what advice would you give to a young person looking to pursue a career in software engineering?

Chih-Ming: Always look beyond the interfaces. A well-defined interface between systems should be the basis for software integration. However, in practice, the surface of the interface may be missing some key information needed by the component. Trying to find the information behind the interface of the software component may grab technical consideration of the design, which is an experience accumulating process. This, in my opinion, will be beneficial throughout the entire career.