

## Interview with Alexander Kocher, President EB Automotive



“Software integration is an increasingly important discipline.”

Elektrobit (EB) became a strategic partner of Daimler this year with responsibility for the development of driver assistance software and related support services. EB also has a 51% stake in the joint venture e.solutions, together with Audi (49%), and develops software for infotainment systems. ATZelektronik talked to Alexander Kocher, who heads Elektrobit’s Automotive Division, about the new role distribution in the supply chain.

Alexander Kocher (born in 1960) gained an MSc in electrical engineering at Graz University of Applied Sciences in 1986. He embarked on his career as project manager at Siemens Industrie immediately after graduation, where he was involved in many different hardware development projects and the development of ISDN telephony. In 1998, Munich-born Alexander moved to Infineon as Director Systems Engineering Industrial & Automotive. He then moved to Siemens Automotive as Director Systems

Engineering Infotainment in January 2001. From 2002 onwards, he spent five years as Vice President with responsibility for the TLA platform at Siemens VDO and with responsibility for Navigation & Maps until 2008 after the Continental take over in 2007. In mid-2008 he moved to Windriver as Vice President GM Automotive Solutions. Kocher has been Automotive Director at Elektrobit in Erlangen since the end of 2011.

**ATZelektronik: Infotainment software and driver assistance systems are fast becoming factors that, as a core competence, can give OEMs an important competitive edge. Are an increasing number of business models being created that leave out tier 1 suppliers?**

**Kocher:** Suppliers aren't just being phased out. It is true, though, that the automotive manufacturers are building their general software competence and are also developing specific core competencies in infotainment and driver assistance systems. They're collaborating with the software manufacturers directly so that they can be involved in the development process. Other partnerships and joint ventures are likely in this very dynamic market. The partitioning of software and hardware is also becoming increasingly significant. Here, I believe that the traditional tier 1 supplier responsibility for hardware and in some cases also system integration will continue to exist. Software integration is becoming an increasingly important discipline. Tier 1 suppliers with this core specialisation are in demand, and they may possibly also enter into partnerships like the OEMs.

**Is a software company like Elektrobit already a tier 1 supplier?**

I'm cautious about using that term. I'd say we're part of the traditional supply chain. After all, we're responsible for the system and provide the warranty. Both OEMs and suppliers have enough on their hands with the software as a result of the growing complexity of series development projects. They have to know they can depend on us. You have to remember that the software development process doesn't end

with the vehicle SOP. It has to be maintained and given functional upgrades throughout the entire product lifecycle.

**You're involved in the development and implementation of the Genivi open software platform. Daimler and Audi aren't members of this consortium. Does that mean a conflict of interests for you or your customers?**

I don't think there's a conflict of interests on either side. We offer software and software developments for all platforms and proprietary systems and we are an independent market player despite our partnerships and shareholdings. We also have to maintain confidentiality when we're working on two development projects in the same field.

**Elektrobit can respond faster to innovations in the device market with Audi and Daimler, but with the 185 members in the Genivi Alliance you have to adhere to standards and find the biggest common denominator.**

With the Linux platform, among other things, the Genivi mem-

bers are technologically close to the end-customer market. Obviously, the development and implementation process is slowed by the approvals process when a standard is being defined. The contract side of things also takes time. That's just the way it is. But the technologies deliver everything that an innovative company could want. So in that respect, the Genivi Alliance can respond just as quickly to trends.

***"The traditional supply chain still exists. Only the role of tier 1 suppliers is changing."***

**To what extent are OEMs in a relationship of dependency in their partnerships for infotainment and driver assistance systems? Normally automobile manufacturers don't rely on one single provider.**

The partnerships don't involve individual projects but medium to long-term programmes with durations of five to ten years. This long-term arrangement is the basis for the very important

"Long-term partnerships like those with Audi and Daimler are the basis for each partner to focus on its core competencies, which is crucial," emphasised Kocher.





"I can imagine extended partnerships with device manufacturing companies," said Kocher.

focus of each partner on their core competencies and the role distribution that we spoke about earlier. This is the only way that automobile manufacturers and suppliers can drive innovation.

**Will the dynamism and power of entertainment electronics also have a major impact on your business? Will mobile and integrated solutions compete against each other?**

I don't think there'll be any competition. The market has already answered and it's our job to build the bridge for the connection of the mobile devices ...

**... but the dividing line between driver-relevant and therefore safety-relevant functions also has to be drawn. The device manufacturers are also ambitious in that area and the market is becoming a more dynamic place as a result.**

I don't see the device world here yet. The automotive industry has to meet stringent functional safety requirements in accordance with ISO 26262 and device ma-

nufacturers and their apps will have to satisfy the same requirements. I'm not blocking them out. On the contrary. I support innovations from the consumer segment. Where would we be today without apps? However, driver-relevant data, such as data which influences the engine and transmission control unit for predictive driving to achieve maximum efficiency have to remain the automobile manufacturers' domain.

**The dividing line is already crossed when navigation data that is necessary for the driver assistance functions can be transferred to the vehicle from a smartphone.**

That's right. It's why vehicle manufacturers are working on methods and architectures that guarantee safety in that kind of situation. It's also important to provide the infrastructure and network coverage. There are still some gaps in the network where even integrated solutions in vehicles don't work.

**Is it conceivable that Elektrobit might partner with a device manufacturer one day?** Have you thought about a possible partner?

That kind of an extended partnership is definitely conceivable. It would also be about supplementing core competencies with complementary ones, like we discussed earlier. I can't give you the names of any potential partners at this time, though. As you know, Google was interested in moving into the vehicle market and it is still on the case. In fact, Google is very progressive in the field of autonomous driving.

***„In 2014 Elektrobit will be establishing its Connected Car business unit.“***

**Will it be necessary to adapt development methods or develop new tests for more complex driver assistance systems and infotainment functions?**

The optimisation of test methods is an evolutionary process that has made vast progress over recent years. Audi already communicated back in 2012 that the modified development methods of e.solutions have reduced the total number of software errors by half. The error rate has declined so sharply because software systems and functions can be validated and optimised in the very early stages of their development. That's the real innovation. The agile software development strategy is to develop an operable system as quickly as possible and then gradually integrate the new functions.

**The early tests mean that you quickly leave your software subsystem behind and work with the overall system. Many sys-**



**tems engineering companies in the market aren't considered to be very competent. To what extent are you systems engineering experts?**

If we and our partners weren't competent systems engineers, we would never be able to cope with the complexity of our projects.

**Do you think that the timeframes of current concepts on the introduction of automatic driving are realistic?**

It's a very dynamic field and I'm very impressed by the technical implementation of ready-for-series-production traffic jam assistants and the visionary automated journey by Daimler following the footsteps of Bertha Benz.

However, the legal framework will only allow for slow progress, even though I believe that controlled systems will be more failsafe than the driver itself in future.

**What will Elektrobit be focussing on in the near future?**

Functional safety is a key issue for us and we'll also be very much involved in the development of automated driving concepts. Next year we'll be establishing a Connected Car business unit so that we have the organisational structures in place to handle this trend.

Thank you for the interview!

Interview: Markus Schöttle  
Fotos : Matthias Haslauer

