The Real Life

Dear Readers,

The modern times influencing the automotive industry can almost be regarded as a game of Musical Chairs: Under Diess, VW wanted to develop their own chips, and yet in 2022 the pendulum swung once more in the direction of established semiconductor manufacturers as suppliers of high-end CPUs. Qualcomm was selected as a partner, whose processors were destined to drive all VW models partially/highly automated up to SAE Level 4 from 2025 based on Cariad software. Even BMW had announced a partnership with Qualcomm at the start of 2022 after Intel's subsidiary Mobileye seemed to have made the running. Mercedes, until recently, had wanted to develop and offer software for ADAS functions "together with NVIDIA from 2024". However, since the announcement at the IAA 2023 that starting with MBUX, here too Qualcomm chips will be used, the end seems to be nigh for even this liaison – probably for cost reasons since NVIDIA participates in the turnover in relation to the systems. And the large suppliers are still waiting in the wings with their designs.

This shows us that partnerships are not always destined to last for an infinite time, as in real life. Therefore, it seems reasonable to follow the advice of programming software hardware-agnostically or at least from the perspective of simple and rapid portability. Then one is, if it works, more independent of the hardware that one could exchange if so desired or if the supplier no longer supplies the original homologated version.

Something that should definitely be included in the list when selecting hardware is RISC-V. Infineon, Nordic Semiconductor, NXP Semiconductors, Qualcomm (sic!), and Robert Bosch have announced that they will work jointly on a RISC-V solution and ecosystem. This could be a path towards more porosity in the system world in the sense of code reuse, if it is successful.

Either way, being flexible is paramount as in "look before you leap". And if the need to change occurs significantly after the decision "for eternity", which was optimum at the time: Just hope that the foundations have been laid sufficiently agnostic of the software and hardware and are flexible enough to be seamlessly reused in the new world. Because when things fall apart, it can get unpleasant and pricey. That is no less true in the automotive industry than in real life.

Enjoy reading this edition!

Robert Unseld
Responsible Editor

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