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Enhancing switch functionality with optimized hardware utilization

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Short Bio

Illia Safiulin was born in Donetsk, Ukraine. After receiving his Master’s in Telecommunications from Technical University of Vienna, he started his professional career in industry as a project engineer in aerospace department of TTTech, dealing with safety and reliability of the avionics components. He has developed his career to the position of Product Manager Aerospace.

Currently he is working as a Product Manager in Elektrobit, leading the EB zoneo product line, dedicated to efficient solutions for in-vehicle networking.
Importance of preparation

“By failing to prepare, you are preparing to fail”

Benjamin Franklin

- Technology is moving forward exponentially
- Number of functions and features growing exponentially as well
- We are at the stage where both SW and HW nearly reach its limits, thus finally a way closer collaboration needed
- The are already HW accelerators available; now it is time to connect it with smart and optimized SW
What is the state-of-the-art of SDV?

Where we are now?

Today, the most wanted features from consumers are:

• driver assistance features towards fully autonomous driving
• infotainment innovations with increased amount of data to be managed
• intelligent connectivity solutions, becoming a part of IoT with associated OTA/FOTA updates
What makes it software defined?

Example: Dashboards

**Hardware based Dashboard**
- Optimized (hardware) display for specific functionality
- Domain-specific information is used in one display
- New functional displays need a change of the hardware (re-design)

**Software based Dashboard**
- Generic (software) display for any functionality (speed, speed limits..)
- Cross-domain information used in one display
- New functionality easily possible with software updates

SW functionality extended
Automotive E/E architecture change for SDVs

Zonal nodes as key components for SDVs