

Major Automotive Manufacturer Chooses Keysight Eggplant

US-based automotive manufacturer set to transform IVI user experience and hardware-in-the-loop end-to-end testing with Eggplant Test

Organization

- Prominent automotive manufacturer headquartered in Japan
- Produces diverse automotive range including sedans, SUV's trucks and EV's

Challenges

- Seamless functionality and user experience
- Need to handle diverse UI layouts and configurations

Solutions

- Automated regression testing
- Integration with Vector CANoe
- Addressing UI variations across different sub-brands

Results

- Enhanced testing efficiency
- Confidence in ability to deliver on-the-road end-to-end testing
- Decision to expand use of Eggplant to Japanese headquarters

Introduction

A leading automotive manufacturer in the USA has chosen Eggplant to automate regression testing of both IVI and handset integration as well as integrate with the Vector CANoe solution across their different sub-brands. Facing the challenge of ensuring seamless functionality and user experience, they saw how Eggplant software test automation from Keysight was perfectly positioned to revolutionize their testing procedures. Here we delve into their engagement with Eggplant and the exciting path ahead that awaits them through their collaborative efforts.

Initial engagement and use cases

The manufacturer had a critical requirement to optimize their IVI testing processes, focusing on critical use cases such as the new user experience of pairing a phone to the car, making calls from the IVI system, and interacting with Android Auto and Apple CarPlay. These tests needed to be conducted both on test benches and within actual vehicles, presenting a multifaceted challenge.

Keysight's team worked closely with the manufacturer and the Original Equipment Manufacturer (OEM), to ensure a seamless integration and understanding of the testing requirements. Ahead of the proof of value (POV) phase, thorough preparations were made to establish connections with the Linux-based

head units and procure necessary devices, demonstrating the commitment to success from all parties involved.

Furthermore, Eggplant collaborated closely with the manufacturer to seamlessly integrate with Vector CANoe, facilitating interactive testing of the car's sensors, actuators, and cameras. Previously, the process relied on manual testers performing UI testing concurrently with CAN bus validation. This integration provided a significant advantage in terms of reliability, automation, and speed.

Proving value

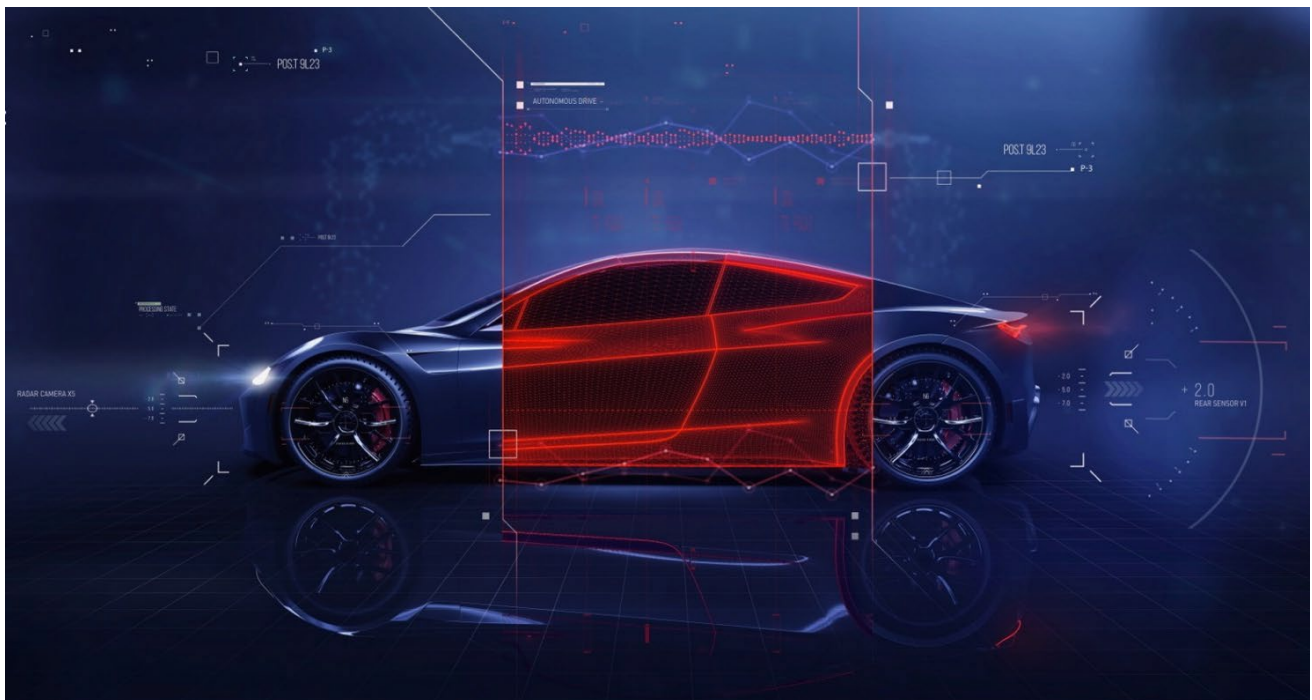
The POV phase commenced with the completion of the manufacturer's key use cases on the test bench, showcasing Eggplant's capabilities in simulating real-world scenarios. The team transitioned to do the same use-cases in a physical car. Here the team encountered a new challenge—the car assigned for testing had a different version of the IVI system, leading to UI variations.

However, this obstacle proved to be an opportunity to highlight Eggplant's adaptability and agility. With swift adjustments, the team successfully completed all use cases in both the car and test bench environments, demonstrating Eggplant's versatility in handling diverse UI layouts and configurations.



Value added solutions

As the POV progressed, Eggplant went beyond the initial scope to address additional testing needs identified by the manufacturer. Leveraging Eggplant's functionality, a new test scenario focusing on interactive tasks was performed during on-the-road end-to-end testing which included multi-domain car sensors and actuators. This proactive approach not only provided added value to the manufacturer's team but also showcased the depth of Eggplant's capabilities in meeting evolving testing requirements.



Positive feedback and continued collaboration

At the conclusion of the initial engagement, the manufacturer expressed utmost satisfaction with the results achieved through Eggplant's automation solutions. The team provided glowing feedback, acknowledging the effectiveness and efficiency of Eggplant in enhancing their testing procedures and will be extending use of the Eggplant solution to their Japanese headquarters. In the subsequent weeks, Eggplant continued to collaborate with the manufacturer to address integration with the Vector CANoe suite of tools, further solidifying their partnership and ensuring a seamless transition to automated testing.

Conclusion

The manufacturer's relationship with Eggplant looks set to yield remarkable results, transforming their testing processes and paving the way for enhanced product quality and user experience. By leveraging Eggplant's automation tools, this company is now looking forward to unlocking new levels of efficiency, adaptability, and innovation in their testing endeavors, and predicts they'll be able to set a new standard for excellence in automotive testing.