



Renault Technologie Roumanie (RTR) – Test center in Titu, Romania

More than just tools

ETAS and Renault: a successful cooperation with ETAS Engineering Services

In a world of progressive globalization, increasing volatility, and continuous downward pressure on costs, efficient engineering is becoming an ever more important factor in a company's success. A solid and well-structured engineering set-up is therefore essential. ETAS' French subsidiary develops and maintains the "Byte to Intelligence" engineered solution based on close customer ties and an outstanding reputation for reliability and integrity. This modular software suite creates useful and robust interfaces between key tools in the real-time embedded systems validation market. Renault relies on ETAS not only to provide the right tools for the job, but also to provide superb levels of quality and maintainability in a responsive and professional format.

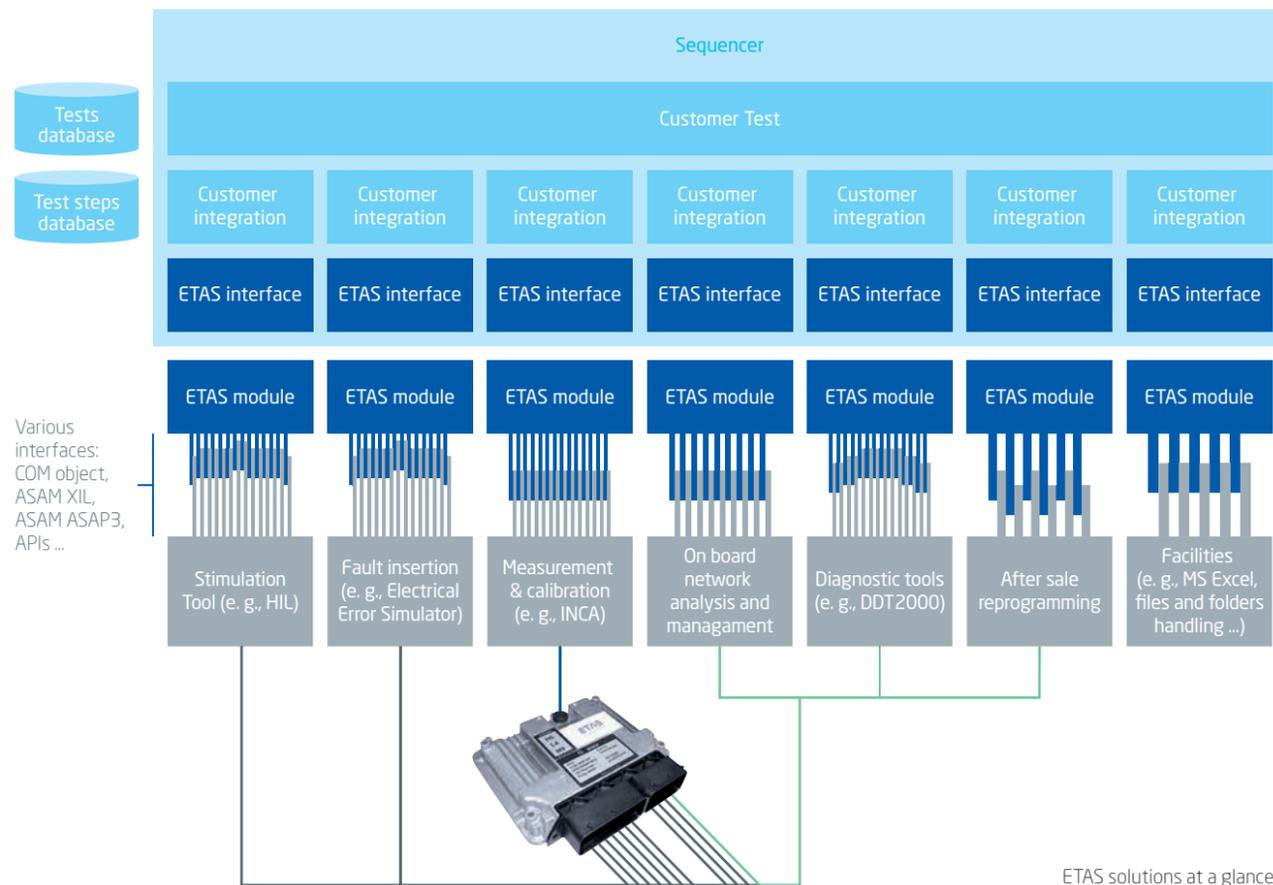
The Renault challenge

Renault validates its ECU software on cutting-edge HiL (Hardware-in-the-Loop) systems. These HiL benches provide full ECU interfacing capabilities and offer engineers extensive flexibility. Renault has also increased its validation capacity in ECU software development projects by using automatic testing at night, when no operators are present, to complement the validation work completed in the daytime.

The requirements for automatic night-time validation are both technically complex and highly demanding. For the automated test to run independently during the night, it must carry out the actions usually performed manually by a validation engineer. These include not just the various control tasks, but also monitoring, measuring, and recording the results.

When engineering makes sense

Complex tooling environments can sometimes force customers outside their core competencies. Task automation is a good example, requiring customers to get to grips with multiple implementations, handle multiple languages, and assemble numerous tool structures. That's where ETAS Engineering Services can help. With extensive expertise in tools and substantial experience in the field, ETAS understands how to deliver user-friendly, customer-focused solutions that rely on more than just tools to achieve success. Building on close customer ties and a professional approach, the French ETAS Engineering Services team offers technical services covering the entire spectrum from acquisition and support to development. With its open mindset, agile methods, and impressive adaptability, the team focuses on successful results every time, developing finely tuned solutions that generate genuine customer satisfaction.



The theoretical benefits of automation can sometimes fail to materialize due to start-up and clean-up delays, and the wide diversity of test equipment. Taken together, these issues often result in high failure rates in automated set-ups. Renault achieves better outcomes thanks to its advanced tool chain, in which each piece of software performs robust, pre-programmed tasks. Underlying stability is assured by updating the software with the very latest technologies from the fast-evolving automotive market, and maintaining the harmonious interplay of all the components.

ETAS added value

Renault achieved its goal by establishing a solid partnership between its in-house HiL teams and the ETAS development team, drawing on ETAS' reliability and expertise in this sector. The partnership has delivered multiple benefits in the field of automation, for example in the development of software modules used for the automated control of ETAS software such as INCA, Renault software such as DDT2000, and a range of other third-party software tools. These control modules are upgraded on a regular basis to keep pace with the new validation functionality requirements that emerge in the HiL process.

ETAS has also proved its worth in the realms of maintenance and support, showing a flexible and adaptable approach to handling new software features and major software migrations, including changes to operating systems and upgrades from 32-bit to 64-bit modules in mixed environments.

Overall, the collaboration between ETAS and the Renault HiL team has achieved flexible, robust, and efficient automation of night-time validation tests, a success story based on a combination of ETAS engineering expertise and Renault validation know-how and experience. This has increased Renault's validation capacity while maintaining the same number of test systems. From 2016 to 2017, the amount of automated HiL testing at Renault doubled, and this growth is set continue apace in the years ahead.

Authors

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“ I am very pleased with the results of our collaboration. The flexibility we witnessed in the technical challenges that came up was genuinely impressive. I feel confident that we will continue to head in the right direction. ”

Stefan-Valentin Popescu, Renault