

Hybrid vehicles are currently a hot topic in the automotive world. With pressures on the industry to reduce emissions, government incentives announced for 'green' vehicles and numerous vehicle launches planned, the stage is set for a dramatic increase in global sales over the next few years.

Introduction

SAIC (Shanghai Automotive Industry Corporation), the largest Chinese manufacturer of motor vehicles, is developing its first hybrid vehicle and required support to help design a suitable immobiliser and remote immobiliser system for its new model, taking into account the complexities of the hybrid drive train and new technologies such as stop/go, remote engine start and smart keys.

The issue

SBD has been investigating the unique security issues associated with hybrid vehicles for some time and has become one of the leading authorities. Whilst hybrid vehicles are not currently at higher risk of theft than their traditional counterparts, there is no doubt that thieves will inevitably turn their attention towards these new models as the hybrid vehicle market develops.

Designing the immobiliser is critical to the successful launch of the SAIC's hybrid model launch. The Chinese market does not require the same level of vehicle security as western markets, so SAIC had limited domestic capability for designing security systems. SBD was tasked with providing them with a direct reference method of designing and evaluating high quality systems on their new models.

The outcome

Through extensive benchmarking, design reviews, interactive onsite support, and workshops, SBD's security experts were able to provide information of technology currently in use as well as drawing up design specification and test standardisation documentation to help SAIC design secure cross-platform solutions. This required a combination of back office research and strategic advice, as well as working with SAIC design and test engineers in China to guide the development teams towards suitable solutions.

- Benchmark the immobiliser systems fitted to hybrid vehicles in Europe and the USA.
- Review SAIC's existing concept design for a hybrid immobiliser.
- Produce a comprehensive Design Guide document
- Conduct an FMEA to account for the interaction with other systems on the vehicle
- Create a Test Specification against which any new design can be evaluated and judged

To learn more about how SBD can help you with your business challenges contact Kavitha Kuppuswamy at kkuppuswamy@sbd.co.uk