



News



Optimizing land forces drivers training with advanced simulation using mixed reality headset

Saclay, France, 01/08/2023 - As the global landscape of military operations evolves, the need for highly skilled and well-prepared land forces drivers has never been greater. To meet this demand, Exail has developed an innovative driving simulator coupled with a cutting-edge mixed-reality headset. This system aims to enhance the operational preparation of land forces drivers while streamlining training costs and logistical requirements.

When driving simulation meets mixed reality

Exail driving simulator represents the pinnacle of realism and immersion in military vehicle training. Through meticulous visual and physical modeling of military vehicles, the simulator is perfectly adapted to Exail's training system mobility and maneuverability. Trainees can expect an authentic and dynamic experience, as they navigate virtual replicas of military vehicles, each offering a distinct set of challenges. To augment the training experience, the driving simulator integrates seamlessly with a mixed-reality headset. This groundbreaking device takes simulation to new heights by merging the virtual and real worlds. Based on off-the-shelf VARJO helmets, the headset allows trainees to see both the virtual vehicle and the physical simulator simultaneously. By superimposing virtual controls onto the trainees' hands, accessing controls becomes intuitive and realistic.

Enabling modular and realistic scenarios

Exail understands that no driving scenarios are the same. Therefore, the simulator boasts a scenario editor to challenge and refine specific driving skills. This editor allows users to be fully autonomous in designing and evolving their scenarios while maintaining utmost doctrine confidentiality. The created scenarios can include different virtual terrains and realistic reproductions of offroad driving conditions such as rocks and sand, all of which can be adapted with tactical enrichment to cater to the customer's specific requirements. The training is adjustable based on operational feedback, providing a flexible and fast learning experience in tactical contexts without exposing the drivers to any real risks. In addition to offering a variety of scenarios and terrains, the driving simulator enables the simulation of different sizes of military vehicles on the same equipment, ensuring versatility and cost-effectiveness. This modularity allows trainees to gain expertise across a diverse range of military vehicles, honing their skills and adaptability.

Enhanced immersion

Exail driving simulator, coupled with the mixed-reality headset, offers unparalleled immersion. Trainees find themselves fully engaged in the training scenarios, responding to dynamic situations with increased situational awareness. "Realism is at the core of Exail's training philosophy. The mixed-reality headset provides a point-of-view relative to the position in the vehicle, immersing trainees in an authentic driving experience. Perimeter views offer a genuine sense of speed, enhancing the feeling of being in a real-world scenario," emphasizes Louis Elcabache, Driving Simulation Sales Manager at Exail. Moreover, the simulator can be enhanced when combined with an advanced dynamic platform. This feature enriches the training experience by simulating the movement and vibrations experienced during actual military vehicle operations. The result is a comprehensive training package that thoroughly prepares land forces drivers for real-world challenges.

A tailored solution for military training

With a rich history of collaborating with vehicle manufacturers upstream of acquisition programs, Exail ensures that its simulation training systems for military vehicles are specifically tailored to meet the unique requirements of armed forces. This comprehensive set of training equipment encompasses high-end military vehicle simulators, interconnected with an

Instructor Operating & Debriefing Station. This sophisticated system allows entire crews to train independently or together, facing realistic situations that simulate the complexities of real-world military operations. It ensures comprehensive training management, providing valuable feedback to enhance trainees' performance and skills.

In conclusion, Exail driving simulator and mixed-reality headset have ushered in a new era of military vehicle training. Through its unique combination of modularity, realism, and immersion, this groundbreaking training solution equips land forces drivers with the skills and adaptability required to tackle the challenges of modern military operations. By raising the standards of military training, Exail plays a pivotal role in ensuring the readiness and effectiveness of land forces drivers in safeguarding global security.

"Our driving simulator not only allows drivers to experience the technological advancements of the latest generation of armored vehicles but also addresses the pressing need for comprehensive driver training amidst increased vehicle mobilization. It offers a vital solution to maintain skills in constrained environments, where factors such as budget restrictions and personnel mobility can pose challenges," states Louis Elcabache.

About Exail

Exail is a leading high-tech industrial company specializing in cutting-edge robotics, maritime, navigation, aerospace and photonics technologies. With a strong entrepreneurial culture, Exail delivers unrivaled performance, reliability and safety to its civil and defense clients operating in severe environments. From the deep sea to outer space, Exail expands their capabilities with a full range of robust in-house manufactured components, products and systems. Employing a workforce of 1800 people worldwide, the company benefits from a global footprint and conducts its business in over 80 countries. Exail was formed by ECA Group and iXblue joining forces in 2022. It is a subsidiary of Exail Technologies, a family-owned company specialized in high-technology.

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