

PRESS RELEASE

RAMSIS as a soldier – ergonomically optimized interior design for military vehicles

Kaiserslautern/Paris, 11/06/2018 **A soldier must be able to move freely and react fast to all kinds of situations – despite bulky protective clothing and equipment. This is why the interior design must be perfect in the tight spaces inside the vehicle, because just a few millimeters can become a safety factor. The digital manikin RAMSIS – now ready for use in military vehicles.**

RAMSIS is a digital manikin used worldwide by leading car manufacturers for the optimal ergonomic design of vehicle interiors – and it can now enter and exit a vehicle in full combat gear, equipped with the most important, up-to-date army equipment. This provides vehicle designers with information on the ergonomic requirements of the occupants at an early stage of development, ensuring shorter development times and reducing the costs for late modifications to the vehicle.

“Ergonomics simulation with RAMSIS Defense provides vehicle designers with the practical relevance they need to precisely analyze and design functionality in the vehicle,” says Anton Preiß, Director Mobility at Human Solutions. “Our manikin can be realistically equipped with protective clothing and equipment. This means that posture, force and consequently the analysis results correspond to actual use.” The limited space available in the vehicle and the additional restrictions of protective clothing and equipment are taken into account at an early stage. “The high degree of practical relevance was very important to us. The RAMSIS Defense module was developed in cooperation with the German Armed Forces and

is aimed specifically at ergonomic simulation in emergency vehicles,” says Anton Preiß.

Plan space requirements and posture realistically

RAMSIS behaves according to the equipment attached and/or worn: In real life, clothing can restrict the mobility of individual body parts – boots can restrict ankle movements, for example, and if a soldier is wearing a helmet, his posture in the vehicle changes because he has to lower his head. These restrictions are automatically addressed in RAMSIS, so the simulation results are especially realistic.

3D equipment library with realistic features

The core of RAMSIS Defense is the integrated equipment library. The most important items of the current equipment of German soldiers such as combat jacket and pants, boots, protective vest, helmet and the newly-introduced electronic back were digitized with 3D scanners and integrated into the equipment library. The RAMSIS Manikin can be equipped as required to suit the intended use.

About Human Solutions

Human Solutions GmbH, based in Kaiserslautern, Germany, is the creator of RAMSIS, the world's leading digital manikin, with which vehicle interiors can be optimally designed to meet ergonomic requirements. The top 30 companies in the automotive industry work with software solutions from Human Solutions. The company also brings its ergonomics simulation expertise – such as the ergonomic design of industrial workplaces – to other industries.

The company is active all over the world, with around 50 employees in Kaiserslautern, Munich and Morrisville, USA as well as partners in numerous other countries.

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