

New Tech Enhances Situational Awareness in Combat

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Modern armored fighting vehicles achieve high levels of crew survivability using both passive and active protection. However, to maximize this protection, all vehicle hatches need to be closed and this significantly reduces crew situational awareness. A new technology will protect ground forces in combat and try to solve this problem.

The ALTERA local situational awareness system (LSAS) acts as the eyes and ears for soldiers in combat and is designed to increase awareness and protection. It uses visual and audio technologies to provide vehicle crews and operators with improved situational awareness by enabling them to hear and see their surrounding environment while remaining protected under armor. Basically, it is an integrated vehicle camera system that will deliver an immersive experience for the crew while they remain safely behind armor. The technology aims to replicate the crew environment when operating with hatches open.

The system was developed by Tectonica Australia, trialled by Rheinmetall Defense and demonstrated to the German Bundeswehr (armed forces) to assess the improvement to situational awareness it delivers.

Thanks to the system, crews can record reconnaissance missions and conduct after-action reviews while instructors can supervise trainee crews and safety officers can monitor gunnery training from the comfort and safety of the passenger compartment. The imagery can also be made available to the battle management system.

Tectonica said LSAS brought together a number of critical vehicle functions into a single system by applying the principles of open architecture.

The system will be exported through the Rheinmetall Defense global supply chain. Tectonica has developed the technology and successfully integrated it during two programs – the LAND 400 Phase 2 trials with the Australian Army and the German Army's demonstrator Boxer project.