



# SITUATIONAL AWARENESS AND DRIVER VISION ENHANCEMENT USING PERISIGHT® SYSTEM

DGA and STAT, France

## / CONTEXT

During latest armed conflicts, light and armored military vehicles were often targeted. These attacks stood as the first cause in casualties. Military vehicles' on-board crews require systems that help in improving their safety. These systems must provide useful information on the environment, either for Situational Awareness (SA) or for Driver Vision Enhancement (DVE), by day and at night. Anytime, crews have to be able to know what is going on outside their vehicle, without having to expose themselves by going out.

Besides, such systems must be easy to integrate into existing vehicles, and without affecting their integrity.



PeriSight®, was assessed by the French DGA and STAT, for the SA and the DVE of a VB2L (light-armored vehicle).

Two configurations were tested:

- Centralized: one Fisheye and two WFOV PeriSight® modules
- Distributed: six WFOV PeriSight® modules

Each configuration also included:

- One Vigisight® which embedded additional features (digital stabilization, automatic detection and tracking) and processed video before sending it for display.
- Two tactile screens with HMI to control the system; one for the driver and one for the commander.



HMI of the distributed configuration

## / PERFORMANCE EVALUATION

Both PeriSight® configurations were assessed during 10 days. Armor was not affected since existing carriers and cable through holes were used.

The following characteristics were evaluated:

- DRI range of thermal and low light channels by day, at dusk and at night.
- The coverage of the observed area, especially how PeriSight® manages to cover the same area seen by several modules.
- Relevance of image processing features (digital stabilization, automatic detection and tracking)
- Ergonomics of PeriSight®

## / CONCLUSION

SA was validated, from the vehicle to the DRI range. Although it was not the main objective, DVE was also validated, both for driving and manoeuvres. HMI was found ergonomics and easy to operate. Indeed, assessors learned how to use it in a very short time. Besides, additional image processing features were judged very positively. Finally, PeriSight® was considered to be mature and reliable, as no failures occurred during the 20 days of assessment, with harsh weather conditions sometimes (fog, snow and rain). **PeriSight® is a reliable, intuitive and ergonomics optronic system, which can be easily integrated into any existing military vehicles to provide SA and DVE to the crew, by day and at night.**

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