



Dedicated to innovation in aerospace

AEROSPACE OPERATIONS DIVISION

TRAINING, SIMULATION & OPERATOR PERFORMANCE

Artificial Intelligence for Military Simulation

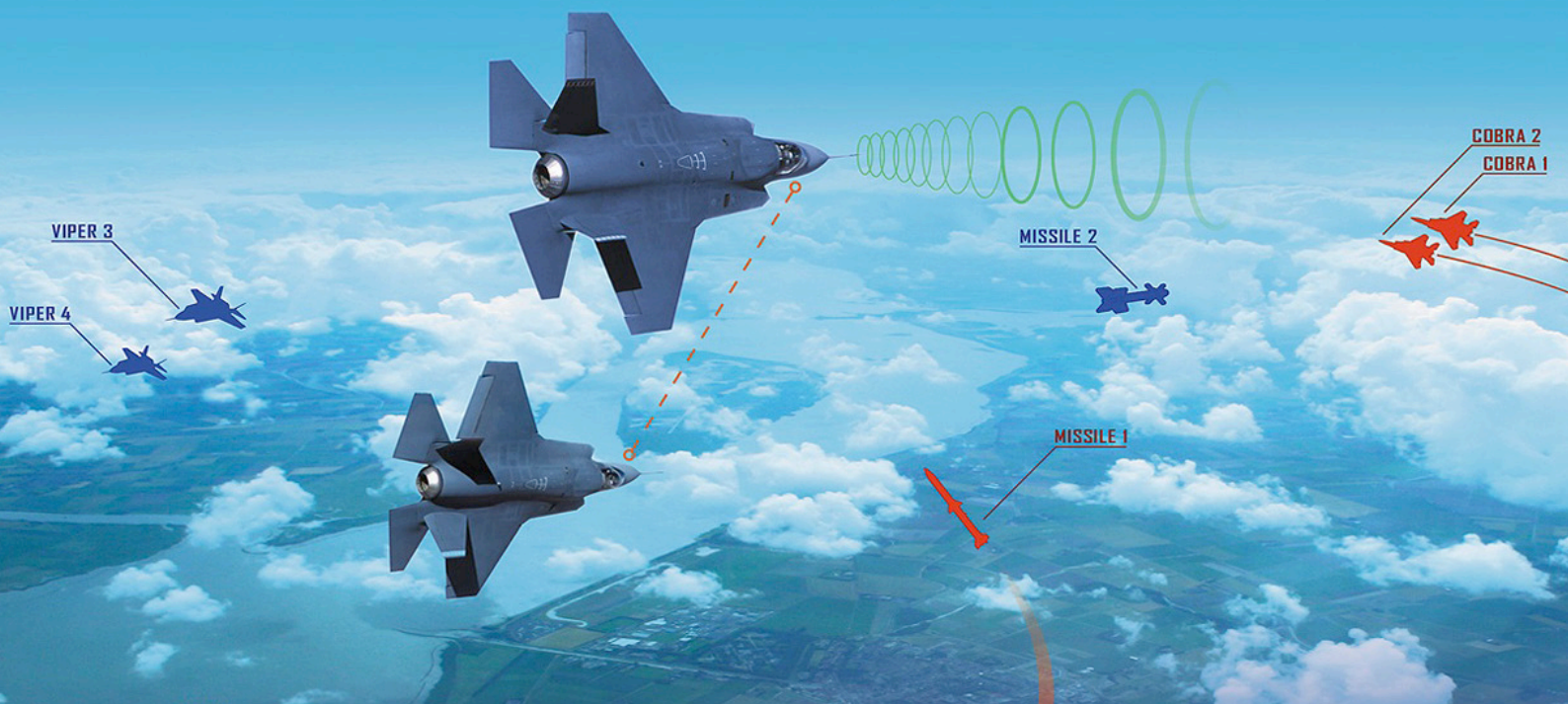
PRODUCTS & SERVICES



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AIMS let you experience complex scenarios before they become reality

Artificial Intelligence for Military Simulation (AIMS) allows for richer and more realistic behaviour of simulated individuals, teams, crowds and platforms in complex environments. Such simulations are better tailored to the needs of users: decision makers, trainees and instructors. Moreover, AIMS enables an easier, automatic scenario development process for the scenario developers.



WHAT YOU NEED

Many military tasks can be performed more smartly when supported by simulations in which soldiers can practice with realistic role players, implement potential solutions and freely experiment with new tactics, procedures and materiel. Behaviour of entities in such simulations is based on artificial intelligence and machine learning algorithms that are able to classify objects in complex images, to resolve intricate puzzles and to forecast fuzzy situations.

WHAT WE DELIVER

Within the AIMS R&D programme, NLR will demonstrate the use of machine learning techniques to generate credible behaviour of synthetic role players. We will demonstrate that we can generate such Computer Generated Forces (CGFs), even in the absence of actual behavioural data or when we have sparse data from different sources. We will demonstrate that users can naturally interact with such CGFs. Finally, we will ensure that the behavioural models can be used and re-used in the simulations of the Ministry of Defence.

OUR CAPABILITIES

The purpose of an R&D program like AIMS is to build up knowledge and skills that may be materialised by the Ministry of Defence in follow-on developments: in technology development projects and for direct operational support. For that purpose, NLR's computer scientists, specialised in Artificial Intelligence (AI), modelling and simulation, will demonstrate concepts at the lower 'Technological Readiness Levels' using state of-the-art techniques, software and hardware. Some of the most promising AI and machine learning techniques for military applications have already been developed in several Ph.D. projects, facilitated by

NLR, together with the computer science departments of major Dutch universities. These techniques can now be applied for demonstrations for military training, decision making and data analysis using the versatile simulation environments and analysis tools that are available at NLR.



PRODUCTS & FEATURES

The Ministry of Defence will be able to further develop and integrate the program in its simulations. Users (decision makers, trainees, instructors, scenario developers) will benefit from faster and more efficient generation of behaviour of CGFs that will also be more credible, hence effective. A set of Use Cases will address the needs of different commands/users.

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