MBDA collaboration wins national engineering award
for work with artificial intelligence

MBDA, along with its industry and French Government partners, have been awarded the prestigious Ingénieur général Chanson prize for their work combining artificial intelligence (AI) and massively parallel processing to develop new real-time target Detection, Recognition and Identification (DRI) technology.

The Association de l'Armement Terrestre (AAT) has presented this year's award (the 46th) to the 2ACI (Acquisition Automatique de Cibles par Imagerie – automatic target recognition by imaging) programme team, which was made up of employees of MBDA and Kalray and staff from the French defence procurement agency (Direction Générale de l'Armement (DGA)) and the French Army's technical section (Section Technique de l'Armée de Terre). The award was presented by Stéphane Mayer, president of the Groupement des industries françaises de défense et de sécurité terrestres et aéroterrestres (GICAT).

The 2ACI programme has produced technology based on Artificial Intelligence (algorithms and image data bases for deep learning) that enables automatic target recognition by imaging. The 2ACI function thereby allows the detection, recognition and identification of fixed and moving targets through real-time processing of the video stream output from weapon systems imaging sensors. The technology therefore meets a common functional need across the different services of the French armed forces both for active surveillance and for early warning and engagement of threats. It provides a substantial aid to the human operators, giving them more time to confirm a target identification while reducing the overall reaction time of the system.

The work of this programme has resulted in the production of two demonstrators. The first was installed on a heavy armoured vehicle and was evaluated in operational conditions on a DGA-Techniques Terrestres (DGA land techniques) test site. The second was delivered to DGA-Maîtrise de l'Information (DGA information management) for a laboratory evaluation.

Those demonstrators have proved the operational efficiency of the 2ACI function and that it could be integrated in due course to the French Army combat system Scorpion, as well as to the MMP firing unit.

This technology programme has been conducted by MBDA together with the French start-up Kalray - a pioneer of processors for new intelligent systems. It also illustrates the sovereignty strategy established by MBDA within its Open Innovation framework, which aims to reinforce its links with French and European partners.

The DGA has contributed its technical expertise and the Section Technique de l'Armée de Terre its experience operational needs.

Notes to editors:

The objectives of the **AAT** include favouring the development of high-level discussion in the area of army weapons, disseminating knowledge, and being a hub for activities in this field. The AAT – Ingénieur général Chanson prize has been awarded every year since 1972 for work that has advanced land weapons, incorporating a certain level of innovation, but sufficiently practical to be likely to have operational applications.

Kalray (Euronext Growth Paris — FR0010722819 — ALKAL) is the pioneer in processors for new intelligent systems. As a real technological breakthrough, "intelligent" processors have the capability to analyze on the fly, and in an intelligent manner, a very large amount of information, and to make decisions and interact in real time with the outside world. These intelligent processors will be deployed extensively in fast-growing sectors, such as new-generation networks (intelligent data centers) and autonomous vehicles, as well as healthcare equipment, drones, and robots. Kalray's offering encompasses both processors and complete solutions (electronic boards and software). Created in 2008 as a spin-off of CEA ("Commissariat à l'énergie atomique et aux énergies alternatives", the French Alternative Energies and Atomic Energy Commission), Kalray serves customers such as server manufacturers, intelligent system integrators, and consumer product manufacturers, including car makers. For more information, visit www.kalrayinc.com.

MBDA is the only European group capable of designing and producing missiles and missile systems that correspond to the full range of current and future operational needs of the three armed forces (land, sea and air).

With a significant presence in five European countries and within the USA, in 2018 MBDA achieved revenue of 3.2 billion euros with an order book of 17.4 billion euros. With more than 90 armed forces customers in the world, MBDA is a world leader in missiles and missile systems. In total, the group offers a range of 45 missile systems and countermeasures products already in operational service and more than 15 others currently in development.

MBDA is jointly owned by Airbus (37.5%), BAE Systems (37.5%), and Leonardo (25%). www.mbda-systems.com

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