Realistic air combat training for Korean Hawk

Final delivery of embedded training application for fighter aircraft KF-21

Leiden, 25 June 2021 – Royal NLR and Airbus Defence and Space Netherlands have delivered the final software package for the Embedded Combat Training System to LIG Nex1 for integration in the new Korean fighter aircraft KF-21 Boramae. The delivery completes the Embedded Training application, which enables the fighter pilots to perform cost efficient and realistic air combat training.

After three and a half years of development Royal NLR – Netherlands Aerospace Centre and Airbus Defence and Space Netherlands have delivered the final Embedded Combat Training System (E-CATS) to South Korean LIG Nex1. This aerospace manufacturer is responsible for the development of the Embedded Training (ET) unit for the new Korean fighter KF-X. This twin-engine jet, which is developed by Korea Aerospace Industries (KAI), was unveiled at the KAI headquarters and officially named KF-21 Boramae ('Hawk') last April.

Roll out of the KF-21 Boramae (credits: LIG Nex1)

Following the first delivery of the ET application last year, this final software package is a major extension to the ET functionality. It comprises a simulation module that simulates Tactical Data Link (TDL) messages. These messages are used to exchange Command & Control information between team members (pilots) in the formation and the Control & Reporting Centres (CRC). The messages have an effect on the tactical behaviour and operation of platforms and weapon systems which is key for realistic air combat training.

The Embedded Combat Aircraft Training System (E-CATS) is an innovative product, developed by Royal NLR and Airbus DS NL, which provides live mission training for fighter pilots against simulated adversaries (constructive threats). The constructive threats are realistically displayed on the aircraft sensors with realistic performance characteristics. Pilots are able to train individually (single ship ET) or as a formation in the multi-ship configuration.

“We are very pleased with this successful delivery”, states Arjan Lemmers of NLR as project leader. “But we are not done yet. Royal NLR and Airbus Defence and Space Netherlands will continue to support our customer integrating the embedded training application in the following years”. Harry van Hulten, Business Development Manager Defence at Airbus Defence and Space Netherlands, fully agrees: “This important milestone enables the KF-21 pilots to join the 4.5th Generation Air Forces by training full up Live-Constructive scenarios.”

The first operational aircraft are expected in 2026. The two Dutch parties are actively seeking to support the end-customer the ROKAF (Republic of Korea Air Force) with introduction and support to the use and best training practices with the application and the development of operational tactical scenarios.

About Royal NLR - Netherlands Aerospace Centre
Royal NLR operates as an objective and independent research centre, working with its partners towards a better world tomorrow. As part of that, NLR offers innovative solutions and technical expertise, creating a strong competitive position for the commercial sector.

NLR has been a centre of expertise for over a century now, with a deep-seated desire to keep innovating. It is an organisation that works to achieve sustainable, safe, efficient and effective aerospace operations.

The combination of in-depth insights into customers' needs, multidisciplinary expertise and state-of-the-art research facilities makes rapid innovation possible. Both domestically and abroad, NLR plays a pivotal role between science, the commercial sector and governmental authorities, bridging the gap between fundamental research and practical applications. Additionally, NLR is one of the large technological institutes (GTIs) that have been collaborating over a decade in the Netherlands on applied research united in the TO2 federation.

From its main offices in Amsterdam and Marknesse plus two satellite offices, NLR helps to create a safe and sustainable society. It works with partners on numerous programmes in both civil aviation and defence, including work on complex composite structures for commercial aircraft and on goal-oriented use of the F-35 fighter. Additionally, NLR helps to achieve both Dutch and European goals and climate objectives in line with the Luchtvaartnota (Aviation Policy Document), the European Green Deal and Flightpath 2050, and by participating in programs such as Clean Sky and SESAR.
For more information, go to www.nlr.org.

About Airbus Defence and Space
Airbus Defence and Space Netherlands B.V. is a supplier of high-tech products and services for the international aerospace industry. The portfolio of Airbus DS NL includes solar arrays, launcher structures, instruments & services, thermal-mechanical products and communication & control systems. Airbus DS NL is also local reseller of the satellite imagery products & portfolio of Airbus. The Leiden-based company employs more than 325 experienced professionals. www.airbusds.nl

Airbus Defence and Space Netherlands B.V. is part of Airbus. Airbus pioneers sustainable aerospace for a safe and united world. The Company constantly innovates to provide efficient and technologically-advanced solutions in aerospace, defence, and connected services. In commercial aircraft, Airbus offers modern and fuel-efficient airliners and associated services. Airbus is also a European leader in defence and security and one of the world's leading space businesses. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions and services worldwide.

Contacts for the media

Kees de Waal
Press Officer Royal NLR
+31 (0)6 2334 7785
kees.de.waal@nlr.nl

Hella van Leeuwen
Manager communication Airbus DS NL
+31(0)6 3700 2864
h.van.leeuwen@airbusDS.nl