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**Interview with the Deputy
Minister of National Defence
Mr Nikolaos Chardalias**



Defence Exhibition Athens

**9-11
MAY 2023
ATHENS - GREECE**

Pages 24-25



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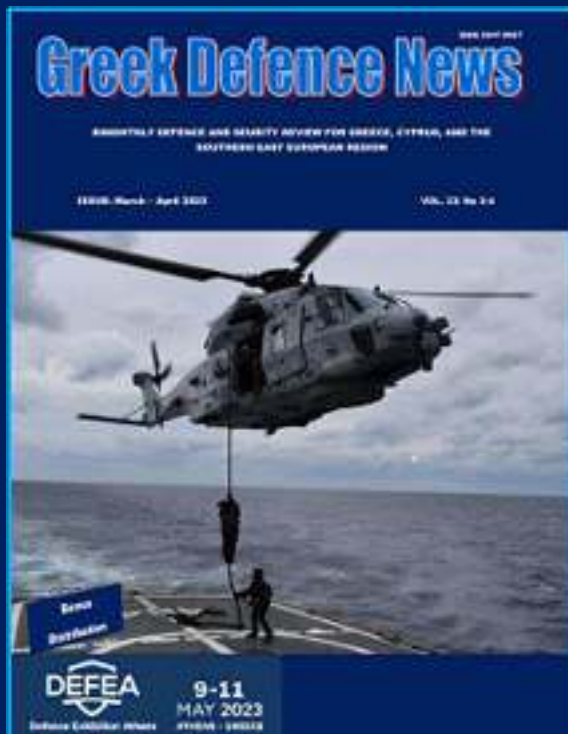
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INDEX OF ADVERTISERS

- DEFEA 2023
- DASSAULT AVIATION
- IAI
- NAVAL GROUP
- LEONARDO
- MBDA
- FINCANTIERI
- EXAIL
- ARQUUS
- EUROSAM
- RHEINMETALL AG
- BAE
- EUROSATORY
- DBDC

GENERAL

➡ Greek PM vows extension of border wall with Türkiye



©Dimitris Papamitsos/Greek Prime Minister's Office via AP

Greece's Prime Minister Kyriakos Mitsotakis pledged to roughly quadruple the length of the current steel border wall with Türkiye over the next year. The government intends to increase the wall's present length of 37.5 kilometers (25 miles) by 35 kilometers during the following 12 months. By 2026, more than 100 kilometers of the wall will have been added, according to government officials. Border security remains a high-profile issue in Greece due to long-standing disputes with Turkey and a mass migration of refugees and migrants into the European Union during 2015-16 that largely was triggered by war in Syria and Iraq.

Mitsotakis and other officials accused their political opponents from the left-wing Syriza party of trying to undermine the project and to block the government's attempt to obtain European Union funding for it.

The government argues the wall has functioned as an effective deterrent against illegal migration, helping prevent more than 250,000 crossings at the land border last year.

➡ Suspects in Foiled Passover Attack in central Athens Appear in Court

Two men accused of planning a Passover attack on a Jewish center in central Athens appeared in court. On 30 March 2023, Greek authorities announced the arrests of the suspects and described the men as being of Pakistani origin. Police alleged they were planning to attack the Chabad of Athens center, which is part of

Judaism's international Chabad-Lubavitch movement. The center hosts religious services, as well as a kosher restaurant and grocery. Investigators are trying to determine if the suspects were planning attacks at other locations. Police have searched multiple sites in Athens as well as in southern Greece and on the western island of Zakynthos. Israel has thanked the Greek government for its response and said that its national intelligence agency, Mossad, had provided information about the suspects.

MINISTRY OF DEFENCE

➡ Ukraine Defense Contact Group Virtual Meeting



© MOD

On 15 March 2023, Minister of National Defence, Nikolaos Panagiotopoulos participated in a virtual meeting of the Ukraine Defense Contact Group chaired by U.S. Secretary of Defense Lloyd J.

Austin III and the Chairman of the Joint Chiefs of Staff, General Mark Milley. NATO Secretary General Jens Stoltenberg also participated. The discussion focused on the importance of sustaining and increasing support to Ukraine as the country continues to resist Russia's brutal war of aggression.

The Secretary General updated the group on NATO and Allies' efforts to swiftly provide Ukraine with key capabilities, including more air defence systems, more armour, and more ammunition. Mr. Stoltenberg stressed that ongoing work to ramp up NATO's defence industrial base is crucial for ensuring our own deterrence and defence, as well as providing support to Ukraine for as long as necessary.



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HELLENIC ARMED FORCES ARMAMENT PROGRAMS

HELLENIC ARMY

➡ GREECE – ASSAULT AMPHIBIOUS VEHICLES (AAVS)



On 17 March 2023, the State Department has made a determination approving a possible Foreign Military Sale to the Government of Greece of Assault Amphibious Vehicles (AAVs) and related equipment for an estimated cost of \$268 million. The Defense Security Cooperation Agency delivered the required certification notifying Congress of this possible sale.

The Government of Greece has requested to buy sixty-three (63) Assault Amphibious Vehicles, Personnel Variant (AAVP-7A1), nine (9) Assault Amphibious Vehicles, Command Variant (AAVC-7A1), four (4) Assault Amphibious Vehicles, Recovery Variant (AAVR-7A1), and sixty-three (63) 50-Caliber Machine Guns (Heavy Barrel). Also included are MK-19 Grenade Launchers, M36E T1 Thermal Sighting Systems (TSS), supply support (spare parts), support equipment (including special mission kits/tools/Enhanced Applique Kits (EAAK)), training, technical manuals (UNCLASSIFIED), technical data, U.S. Government and contractor engineering, technical support and assistance (including Contractor Engineering Technical Services (CETS)),

Integrated Logistic Support (ILS) management services, parts obsolescence remediation, calibration services, transportation, Follow-on Support (FOS), Return, Repair and Reshipment of unserviceable repairable items/equipment, applicable software and apparel, and other related elements of logistics and program support. The estimated total cost is \$268 million.

➡ Marder and Lynx infantry fighting vehicle

On 16 September 2022, a Memorandum of Understanding (MoU) was signed between the Ministry of Defense of Germany and the Ministry of National Defense of Greece regarding the donation of forty (40) Marder infantry fighting vehicle to replace forty (40) BMP-1 infantry fighting vehicle which were granted to Ukraine as a part of Greece's military assistance.

According to the delivery schedule fourteen (14) vehicles have already been received while an additional six (6) are expected to be delivered soon. The delivery of the remaining twenty (20) Marder is expected to take place in the second half of this year.

Regarding the acquisition of Lynx infantry fighting vehicle and the upgrade of Leopard 2A4 Main Battle Tank the Chief of General Staffs Council has recently approved the activation of the following programs:

- Upgrade of 123 Leopard 2A4 Main Battle Tank including initial and follow-on support.
- Procurement of 205 Lynx infantry fighting vehicle.

HELLENIC NAVY

➡ Meko frigate upgrade

On 7 April 2023, the Standing Committee on National Defence and Foreign Affairs of the Hellenic Parliament approved the modernization program for the Hellenic Navy's four MEKO (Hydra) class frigates. The schedule for the four vessels upgrade is 7 years, from 2023 to 2029, for an estimated cost of 605 million euros.

The upgrade includes:

- Replacement of existing marine generators

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TKMS (ThyssenKrupp Marine Systems) will be the prime contractor, the program will be implemented by the Hellenic Shipyards, while the local companies SIGNAAL HELLAS, η THALES HELLAS και η MELITA will also be involved covering of 15% of the total modernization work. The MEKO (Hydra) class are a group of four frigates in service with the Hellenic Navy. They were designed in Germany and are part of the MEKO group of modular warships, in this case the MEKO 200 design. The programme was awarded in 1988 and partially paid for with FMS aid and provisioned for the commission of six vessels. The first ship was built in Germany and commissioned in 1992 but suffered a serious fire while working up near Portland, England. Repairs were completed in 1993. The Greek built warships were delayed due to financial problems on the part of the Hellenic Shipyards completing in the late 1990s which also led to limiting the total number of vessels to four mainly after the acquisition of eight Kortenaer-class frigates from the Netherlands in the late 1990s. In 2007, an upgrade of the STIR fire control system to allow the firing of the RIM-162 ESSM surface-to-air missile was launched. Salamis was the first to be upgraded and, in August 2008, successfully completed a live firing test. The other three Hydra vessels were upgraded during 2008.

➡ Supply of Batteries, Accumulators for Hellenic Navy's Type 209 and 214 Submarines

On 7 April 2023, the Standing Committee on National Defence and Foreign Affairs of the Hellenic Parliament approved the supply of batteries and accumulators for the Hellenic Navy's Type 209 and 214 Submarines, for an estimated cost of 21million euros. Prime contractor will be the Greek company Sunlight Group.

📦 HELLENIC AIR FORCE

➡ Follow-on Support (FOS) of the Hellenic Air Force's AS-332C1 Super Puma SAR helicopters

The Greek company AEROSERVICES S.A has been awarded with a contract for the Follow-on Support (FOS) of the Hellenic Air Force's AS-

332C1 Super Puma SAR helicopters. The total contract value would be 37.767.204 €. Required spare parts will be provided by the French companies SAFRAN and AIRBUS and the Norwegian company HELI-ONE.

HELLENIC DEFENCE INDUSTRY

➡ INTRACOM DEFENSE in the International Defense Exhibition IDEX



© IDE

INTRACOM DEFENSE (IDE) participated in the International Defence Exhibition "IDEX 2023", held in Abu Dhabi, UAE, between 20-24 February 2023, as part of the Hellenic Pavilion, which was under the auspices of the Hellenic Ministry of National Defence and led by the General Director of Defence Investments and Armaments, Mr. Aristeidis Alexopoulos.

IDE exhibited its advanced products and solutions in the areas of Hybrid Electric Power Systems, Tactical Communication & Information Systems and Surveillance Systems. It's booth was visited by the Ambassador of the Hellenic Republic to the UAE, Mr. Antonis Alexandridis and the Defense Attaché of the Greek Embassy, Mr. Christos Oikonomou, who had the opportunity to be updated on the innovative technologies, products and export activities of the company.

During the exhibition, the IDE's executives had a variety of meetings with industry and government officials regarding its activities in the region, confirming the strong will to cooperate with the UAE and its defense industry.

MAKING NAVAL HISTORY

ΝΕΑ ΕΠΟΧΗ ΓΙΑ ΤΟ ΠΟΛΕΜΙΚΟ ΝΑΥΤΙΚΟ ΣΗΜΕΡΑ ΤΟ ΞΕΚΙΝΗΜΑ ΜΙΑΣ ΝΕΑΣ ΔΥΝΑΤΗΣ ΣΥΝΕΡΓΑΣΙΑΣ

Η Naval Group, ηγέτιδα ευρωπαϊκή δύναμη στα ναυτικά συστήματα άμυνας, με κληρονομιά που μετρά 400 χρόνια περίπου. Περισσότερες από 500 δεξιότητες συνεργάζονται για την ανάπτυξη φιλόδοξων και σύνθετων συστημάτων άμυνας. Οι καινοτόμες λύσεις, που σχεδιάζει, προστατεύουν τα συμφέροντα εθνικής ασφάλειας των συμμάχων της Γαλλίας.

➡ **THEON SENSORS in the International Defense Exhibition IDEX**



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THEON SENSORS participated in the International Defence Exhibition “IDEX 2023”, held in Abu Dhabi, UAE, between 20-24 February 2023, as part of the Hellenic Pavilion, which was under the auspices of the Hellenic Ministry of National Defense and led by the General Director of Defence Investments and Armaments, Mr. Aristeidis Alexopoulos, receiving a large number of visitors. THEON SENSORS had on display its latest products such as the thermal periscopes, monoculars and night-vision binoculars. The visitors showed particular interest in the THERMIS Mk2 series, Family of Thermal Clip-on and Stand Alone sights.

➡ **Miltech Hellas**

On 8 March 2023, a meeting was conducted between the Hellenic Air Force General Staff officers and representatives of the Greek companies Miltech Hellas and International Management and Culture Enterprise. The aim of the meeting was the presentation of a UAV prototype manufactured by the Joint Venture of Miltech Hellas and Aviatec SA Proprietar.

ACTIVITIES OF FOREIGN INDUSTRIES RELATED TO THE HELLENIC ARMED FORCES ARMAMENTS PROGRAMS

➡ **Elbit Systems EW and SIGINT-Elisra**

On 13 March 2023, a meeting was conducted between the Hellenic Air Force General Staff officers and representatives of the Israeli company Elbit Systems EW and SIGINT-Elisra. The aim of the

meeting was the presentation of the company's aircraft self-protection systems, its comprehensive solutions in the electromagnetic spectrum domain, including electronic warfare (EW), spectrum control, communications, and Signal Intelligence. Elisra is a primary source of EW suites for the Israel Air Force and for many other Air Forces around the world – integrating Radar Warning Receivers (RWR), Laser Warning Systems (LWS), IR Missile Warning Systems (MWS), Electronic Countermeasures (ECM) and chaff/flare. Elisra's EW systems are installed in over 30 types of fixed and rotary-wing aircraft of both Western and Eastern origin and can be found in numerous countries across five continents.

Elbit Systems EW and SIGINT – Elisra (Elisra) provides modern defense forces with cutting-edge, comprehensive, modular EW solutions and systems for all a range of airborne platform types and sizes – from unmanned aircraft systems (UAS), through rotary-wing, fixed-wing, jet fighters, to transport and commercial platforms.

➡ **RHEINMETALL ELECTRONICS**

On 9 March 2023, a meeting was conducted between the Hellenic Army General Staff officers and representatives of the German company RHEINMETALL ELECTRONICS. The aim of the meeting was the presentation of the Saphir 2.6 MK (Marder configuration) thermal imaging aiming device which was specially developed for the Marder IFV. The Bundeswehr and other armies already utilize the core technology on a large scale, meaning that it can be used in the Marder too. In turn, this will result in synergies about procurement and operation. Importantly, the latest Saphir 2.6 MK generation has significantly improved the observation range and round-the-clock reconnaissance quality. This has to do with the greater resolution of the detector, for example, and state-of-the-art display technology. Thanks to advanced image processing software from the Saphir family, full performance of the components is now assured under all operating conditions. German mechanized infantry units will still use the Marder for several more years. The armies of a number of other nations also continue to rely on this robust, battle-tested infantry fighting vehicle. For these users, too, the Saphir 2.6 MK is an important element in maintaining the vehicle's combat readiness.

➡ **WFEL**

On 8 March 2023, a meeting was conducted between the Hellenic Army General Staff officers and representatives of the UK company WFEL and its Greek partner PASS DEFENCE. The aim of the meeting was the presentation of WFEL's range of rapidly deployable mobile bridging systems -

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➡ **Diehl Defense**

On 17 February 2023, a meeting was conducted between the Hellenic Army General Staff officers and representatives of the German company Diehl Defense. The aim the meeting was the presentation of the company's HPEM (High-Power Electro-Magnetics) effector systems. Drones used as a weapon have developed into serious safety hazards for public space. For many years Diehl Defence has developed countermeasures such as HPEM (High-Power Electro-Magnetics) effector systems. They interfere with the operation of electronic systems by emitting electromagnetic pulses. At the same time, HPEM effectors pose no threat to the health of users and innocent bystanders.

HOMELAND SECURITY

➡ **Bailey Bridges**

The Ministry of Climate Crisis and Civil Protection announced an international tender regarding the procurement of 23 Bailey Bridges, for an estimated cost of € 12.500.000,00, VAT excluded. The Project is financed by the European Union – NextGenerationEU under the National Plan of Recovery and Resilience "Greece 2.0". Last Date of Bid Submission 24 February 2023.

➡ **Upgrade - modernization of two (2) Super Puma Helicopters**

The Ministry of Climate Crisis and Civil Protection announced a public tender regarding the "Upgrade - modernization of two (2) Super Pumas", for an estimated cost of € 3.000.000,00, VAT excluded. Last Date of Bid Submission 28 April 2023

NATO

➡ **Finland accession ceremony**

On 4 April 2023, Finland became NATO's newest member, upon depositing its instrument of

accession to the North Atlantic Treaty with the United States at NATO Headquarters in Brussels. NATO Allies signed Finland's Accession Protocol on 5 July 2022, after which all 30 national parliaments voted to ratify the country's membership.



© **NATO Finland accession ceremony**

"We welcome Finland to the Alliance!" said NATO Secretary General Jens Stoltenberg, as Finnish Foreign Minister Pekka Haavisto deposited Finland's instrument of accession with the government of the United States, represented by Secretary of State Antony Blinken. The Secretary General then welcomed Finnish President Sauli Niinistö to NATO Headquarters for a flag-raising ceremony to mark the country's accession to the Alliance.

Speaking ahead of the ceremony, the Secretary General thanked President Niinistö for his outstanding leadership and for leading Finland into the most successful Alliance in history. "I am deeply proud to welcome Finland as a full-fledged member of our Alliance and I look forward to also welcoming Sweden as soon as possible," he said. "Joining NATO is good for Finland, it is good for Nordic security and it is good for NATO as a whole," he added. The Secretary General also noted that Finland's accession shows the world that President Putin failed to "slam NATO's door shut." "Instead of less NATO, he has achieved the opposite; more NATO and our door remains firmly open," he said.

The Finnish national anthem and the NATO hymn were played, as Finland's flag was raised outside NATO Headquarters for the first time, in the presence of President Niinistö, Foreign Minister Haavisto, Defence Minister Kaikkonen, the foreign ministers of all NATO Allies and invitee Sweden. Simultaneous flag-raising ceremonies took place at Allied Command Operations (SHAPE) in Mons (Belgium) and Allied Command Transformation in Norfolk, Virginia (United States). Standing alongside President Niinistö, the Secretary General said: "Finland is safer and NATO is

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stronger with Finland as an Ally. Your forces are substantial and highly capable, your resilience is second to none and for many years troops from Finland and NATO countries have worked side-by-side as partners. From today, we stand together as Allies."

➡ **NATO Foreign Ministers wrap up meetings with focus on China and support to Ukraine**

On 5 April 2023, NATO foreign ministers wrapped up two days of discussions in Brussels with a meeting with Indo-Pacific partners – Australia, Japan, New Zealand and the Republic of Korea – and the European Union. "We discussed the global consequences of Russia's war against Ukraine," said NATO Secretary General Jens Stoltenberg. He stressed that if President Putin wins in Ukraine, it would send a dangerous message to authoritarian leaders around the world that they can achieve their goals through brute force.

Foreign ministers also addressed China's growing alignment with Russia. "Allies have been clear that any provision of lethal aid by China to Russia would be a historic mistake, with profound implications," said the Secretary General. He stressed that as Beijing and Moscow push back against the rules-based international order, it is even more important for NATO Allies and like-minded partners to stand together.

Nhsxb bv Earlier, Allied foreign ministers addressed threats and challenges in the Middle East and North Africa, including instability, terrorism and the growing activities of Russia and China. They also discussed the importance of increased defence spending. "At the Vilnius Summit, I expect Allies to agree an ambitious new defence investment pledge, with 2% as a floor not a ceiling," said the Secretary General.

NATO's support to Ukraine was also a major focus of discussions. The Secretary General welcomed the new commitments made by Allies in the NATO-Ukraine Commission on Tuesday (4 April 2023) and encouraged continued military support for Ukraine.

"We agreed to start work on developing a strategic multi-year assistance programme for Ukraine – a clear demonstration that our support will continue for the long-haul," he said. Mr. Stoltenberg added that this programme will assist Ukraine on its path to Euro-Atlantic integration, because "Ukraine's future is in the Euro-Atlantic family."

ESDP

➡ **EDA-initiated multinational fleet of tanker transport now deployable worldwide**



© EDA

The multinational fleet of Airbus A330 tanker and transport aircraft, which was developed with support from the European Defence Agency (EDA), has been cleared for operations worldwide. First proposed at a NATO summit in 2012, the initiative for a Multinational Multi Role Tanker Transport Fleet (MMF) was established by EDA along with the Organisation for Joint Armament Cooperation and the NATO Support and Procurement Agency.

Now with six participating countries, the fleet performs air-to-air refueling of fighter jets, can carry out medical evacuations and also transport cargo and passengers. MMF reached Initial Operational Capability on March 23 in a ceremony attended by EDA Chief Executive Jiří Šedivý and NATO Secretary General Jens Stoltenberg, as well as the ministers and senior officials of the Netherlands, Luxembourg, Belgium, Norway, Germany, Czechia and the European Commission.

EDA's role in getting the project off the ground was crucial, by bringing together contributing Member States, motivating countries to join and negotiating the aircraft acquisition options.

To initiate MMF, EDA set up a project team to work on the harmonisation of requirements towards a future tanker capability. It helped craft the legal framework to establish the programme and smooth the way for the organisational and industrial partners that were to join.

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The sea ahead



The Netherlands, where the NATO-owned aircraft are registered, serves as the fleet's base. Aircraft are also stationed in Cologne, Germany. The Netherlands and Luxembourg launched the programme in July 2016. Germany and Norway joined in 2017. Belgium followed in early 2018 and Czechia joined the MMF programme in October 2019. Seven aircraft from the fleet are in service. Two more are expected to join in 2024, with the tenth aircraft scheduled for delivery at the end of 2026.

At present, the fleet has already provided six million liters – or about twice the volume of an olympic-size swimming pool - of fuel to NATO allies. MMF aircraft were the first tankers to deploy over Poland in support of NATO air policing following Russia's invasion of Ukraine.

In total, the fleet has flown more than 500 missions, as well as supported the evacuation of civilians from Afghanistan and deployed for exercises with NATO partners such as Australia. Later this year, MMF aircraft will fly to the Middle East to support operations against ISIS.

EDA supports all EU Member States in improving their defence capabilities through European cooperation. Acting as an enabler and facilitator for Ministries of Defence willing to engage in collaborative capability projects, the Agency has become the hub for European defence cooperation with expertise and networks spanning the whole spectrum of defence capabilities. Member States use EDA as an intergovernmental expert platform where their collaborative projects are supported, facilitated, and implemented.

CYPRUS

➡ **Michalis Giorgallas, Newly appointed Minister of Defence**

Michalis Giorgallas was born in Marathovounos - Famagusta and is the son of the heroic family of Makis Giorgallas. He graduated from Laniteo Lyceum of Limassol. He served in the Special Forces (31st Special Forces Battalion). He holds a BSc and MSc in Chemical Engineering from the Aristotle University of Thessaloniki.

Upon receiving his degree, he specialized in "Renewable and Sustainable Energy Sources" at the Greek Center for Renewable Energy Sources. He acquired specialities (I) "Integrated

Management of Quality" according to International ISO Standards, (II) Corporate Sustainability, (III) ESG framework, (IV) Carbon Reduction and Net Zero Strategies. He was an accredited EXPPS "Health and Safety" at the Ministry of Labour. He is a member of ETEK.



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He worked as a Chemical Engineer in several consulting and managerial positions in distinguished companies and organizations in Greece and Cyprus. He also studied at the "Journalism Laboratory of Thessaloniki", worked as a radio producer and worked as a political editor with media in Cyprus and Greece. He was an active leader of the Cypriot student movement in Greece. He was the Deputy President of the European Party and the Solidarity Movement Party.

Michalis Giorgallas was a member of the National Council from 2012-2017. He participated in all the critical meetings of the body of that period. He took part in the first international conference about the Cyprus problem held in Geneva at the UN headquarters in the Palace of Nations, under the auspices of the then Secretary General of the United Nations.

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He was a Member of Parliament for Famagusta in the period 2016 – 2021. During his term in the Parliament, he was deputy chairman of the Parliamentary Committee on Agriculture and Natural Resources. He was a member of the Parliamentary Committees (I) Finance and Budget, (II) Education, Culture and Sports, (III) Environment, (IV) Monitoring of Development Plans and Control of Public Expenditures.

He was also a member of the Cyprus-Greece-Israel Tripartite Cooperation Parliamentary Group, the Ad Hoc Parliamentary Committee for the Review and Modernization of the Parliament's Rules of Procedure, and the Ad Hoc Parliamentary Committee for the Investigation of Issues Related to Loans to Politically Exposed Persons. Additionally, he was appointed as an alternate member of the delegation of the Cypriot Parliament to the Parliamentary Assembly of the Organization for Security and Cooperation in Europe (OSCE). He participated in many missions of the House of Representatives abroad.

Michalis Giorgallas is married to Dr Maria Palaomyliou, and they have a son, Angelos.

BULGARIA

➔ MiG-29

The Bulgarian Defence Ministry announced a public procurement tender regarding the overhaul of six engines for MiG-29 fighter jets for an estimated cost of BGN 26.4 million, VAT excluded. Last Date of Bid Submission 3 May 2023.

TURKIYE

➔ HAVELSAN

Since the first day of the earthquake, HAVELSAN became part of the search and rescue teams, sent aid to the earthquake victims, and made in-kind and cash donations to ease the difficult conditions of the people who suffered from these disasters.

Besides these aids HAVELSAN's Unmanned Aerial Vehicles BAHA and POYRAZ drones, took part in reconnaissance-surveillance activities to assist search and rescue teams in the region, especially in villages and mountainous areas, and shared the images they received with the coordination center in the region.



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BAHA met the need for images with its sub-cloud flying ability when it becomes difficult to take images with other UAVs due to bad weather conditions. With the help of BAHA, search and rescue teams provided the first information about the settlements where transportation is not possible.

➔ Field Aerospace Completes Turkish Air Force KC-135 Block 45 Aircraft Modification

Field Aerospace has completed the Turkish Air Force KC-135 Block 45 modification, under a contract through the KC-135 Foreign Military Sales (FMS) program office. The program finished one year ahead of schedule.

Turkey is the second largest operator of the KC-135 Stratotanker next to the USAF. The Block 45 modification removes the legacy autopilot system, Flight Director System, engine analog gauges, and radio altimeter and installs a Dual Autopilot and Flight Director System, new radio altimeter system, and new engine display. The effort included modifications to seven Turkish Air Force KC-135 Block 45 Aircraft. The contract period of performance was from Jan. 29, 2021 to Jan. 28, 2024. Work was completed in December 2022.

Field had previously completed the prototype Block 45 modification on two United States Air Force (USAF) KC-135 aircraft and installed the modification on the first 15 Block 45 Low-Rate Initial Production (LRIP) aircraft. "Our team applied lessons learned from our prior experience performing this modification on the USAF KC-135 fleet to the Turkish KC-135 Program, resulting in an efficient and well executed program." said Ed Williams, Field Aerospace Program Manager.

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SERBIA

→ Türkiye, Serbia developing early anti-nuke strike warning system

Professors from universities in Türkiye and Serbia are working on an early warning system to safeguard the border areas of NATO countries against nuclear attacks. Prepared by Türkiye's Bolu Abant İzzet Baysal University and Serbia's University of Nis to develop an early warning system for the protection of NATO countries, the project was accepted by the military alliance. The project began around three months ago, according to Bolu Abant İzzet Baysal University. Ercan Yılmaz, a physics professor at the university, is leading the production of sensors. Meanwhile, the Serbian team will develop reader circuits and software compatible with these devices.

Yılmaz emphasized that the defense system will be integrated into a drone to continuously scan NATO borders and would play a crucial role in detecting nuclear attacks in advance. The project is expected to be completed in two years.

ALBANIA

→ Minister Peleshi adresse at the Schuman Security and Defense Forum

The Defence Minister Niko Peleshi participated in the "Schuman" Security and Defense Partnership Forum, with the theme "Stronger together in an unstable world", which was held in Brussels on March 20 and 21.

Minister Peleshi took the floor in the panel themed "Responding together to the crisis", where he spoke about the change of international security after the Russian aggression in Ukraine: "The international security landscape has changed profoundly. The ongoing Russian aggression towards Ukraine has highlighted the importance of security as a political issue. After the shock of the security scene, dormant potential conflicts and unresolved issues between states have become increasingly more fragile. Countries have rightfully become more vigilant and are taking steps to prepare themselves for possible conflicts by

increasing their defense capacities." , - said Minister Peleshi. According to Minister Peleshi, major crisis usually lead history to a critical juncture and the need for timely solutions brings to the stage great innovative ideas. He added that this forum is held precisely at a time when peace and security are under threat, so he added: "Let's turn the need for solutions into an impetus for a lasting leap in how we prepare to prevent crises, rather than dealing with the unwanted consequences".

The Defence Minister emphasized the efforts and investments that Albania is making in cooperation with the USA, the EU and NATO in terms of cyber security: "Strengthening cyber security, this new warfare domain, requires investments in infrastructure as well as in human capacities, and it must be developed in a short time and at the same time, with a fairly large budget.", - said the minister.

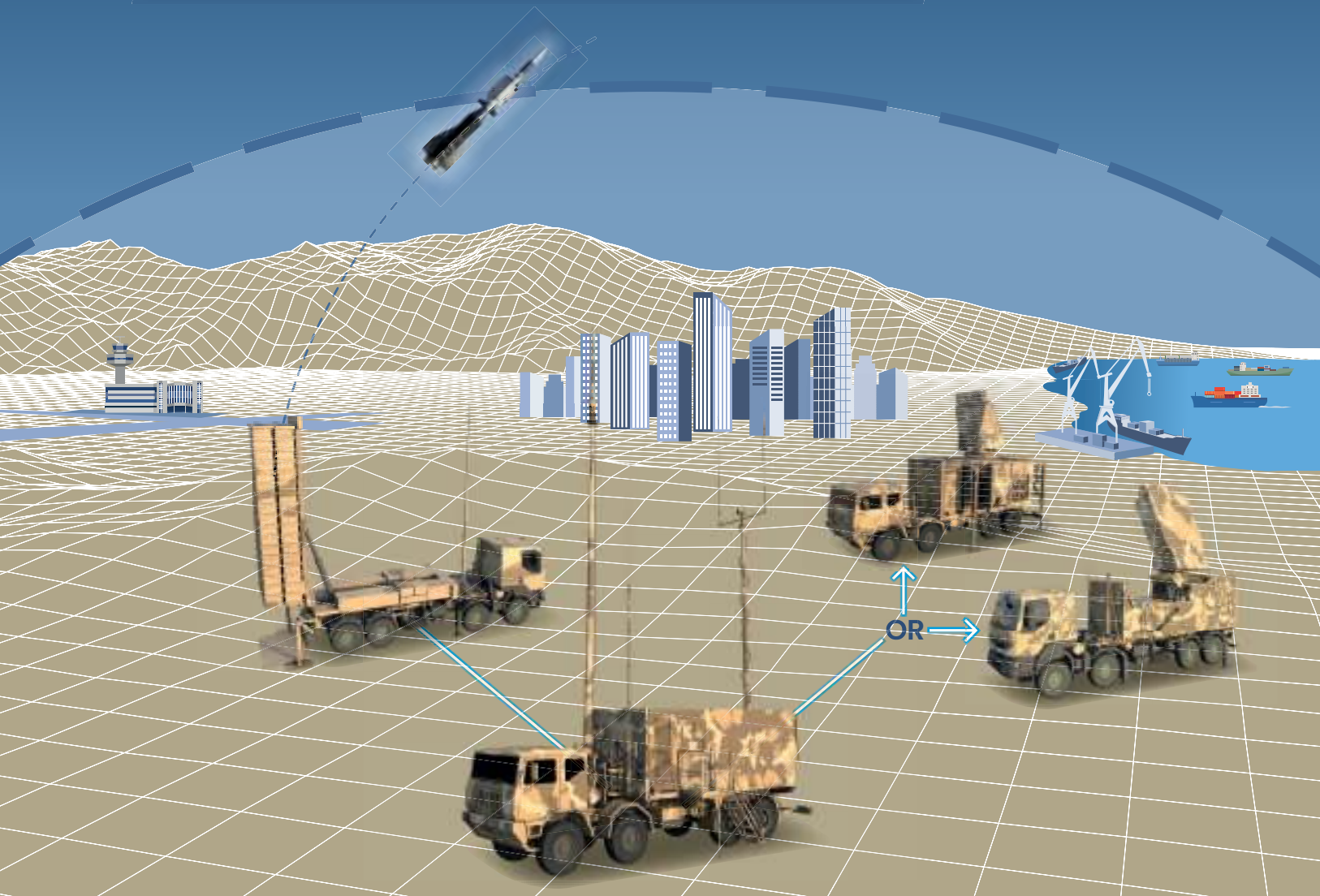
Emphasizing that countries should be more alert to this new war, which Albania faced last year, Peleshi said that: "Albania's experience can serve as a "test-bed" or example for other European countries or even the European structures themselves. The nature of some crises are beyond the control and ability of a single state, irrespective of its power or wealth. Cyberwar is a classic example. Since this kind of war is borderless, fighting it within a country's borders is unsuccessful".

The Defence Minister also spoke about the danger that threatens the Western Balkans from a possible spread of the conflict in Ukraine: "The Western Balkans today feels threatened both by global geopolitical changes, but especially by the danger that can be created by the possible expansion of the war in Ukraine. There are countries that do not have mutual recognition, such as Kosovo and Serbia and there are countries where the ethnic differences can create instability, such as Bosnia and Hercegovina. Moreover, the presence of Russian influence in the media and politics of some countries in the region has caused distress. Faced with these circumstances the only way to ensure peace and stability is being part at "the same club", the joint integration in the Euro-Atlantic structures. As opposed to each other the cost of isolation is even bigger than the cost of Integration. The Kosovo-Serbia dialogue and the recently mutual accepted Agreement can facilitate the long-awaited 'spring' between the two countries and bring about a golden age of guaranteed peace and progress for the region in the European family.", - said during his speech the Minister of Defence, Niko Peleshi.

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Aeronautics will supply the Greek Ministry of Defense with dozens of advanced Orbiter 3 tactical unmanned aerial vehicle systems

The agreement is part of the significant G2G contract between the Israeli and Greek Ministries of Defense for the procurement of Rafael's Spike missiles

On 17 April 2023, Aeronautics Ltd. - a world leader in designing, developing and manufacturing Unmanned Aerial Systems (UAS) for global defense and HLS markets – announced a contract to supply dozens of its Orbiter 3 systems to the Greek Ministry of Defense. The agreement is part of the large contract between the Israeli and Greek Ministry of Defense, worth approximately 370 million euros, for the procurement of Rafael's Spike missiles.

As part of the contract, Rafael will provide an advanced solution enabling significant operational advantage to the modern battlefield; While the Orbiter 3 systems detect, recognize and identify (DRI) the target, the Spike missiles, launched from the air, sea, or land can rapidly close the sensor-to-shooter loop, using the "Fire Weaver" C4I system.

© Aeronautics



The rapid Sensor to Shooter process implementing advanced technologies, enables mission success.

The Orbiter 3 is a small tactical unmanned aerial system and considered to be one of the leading systems in its class worldwide providing superior performance for both defense and HLS applications. Highlights of the Orbiter 3 operational performance includes advanced ISTAR capabilities, runway-independent, long endurance, the capability of carrying various types of payloads, advanced image processing, a small logistical footprint, navigation including in a GPS-denied environment and the ability to withstand harsh weather conditions.

Dan Slasky, CEO of Aeronautics Group: "We are proud to be a part of this significant cooperation with Rafael in the G2G agreement with the Greek MOD. This collaboration demonstrates the technological synergy, and the close business integration between the two companies. We also thank the Israeli Ministry of Defense, which has invested significant efforts to facilitate the agreement, and to the Greek Ministry of Defense for expressing its confidence in the Aeronautics' solution."

Established in 1997, Aeronautics is a world leader in designing, developing and manufacturing Unmanned Aerial Systems (UAS) for the global defense & HLS markets. Backed by continuous research and development and with proven excellent performance and operability, Aeronautics' broad product portfolio includes the expertise of its subsidiaries and offers solutions for a wide range of Intelligence, Surveillance and Reconnaissance (ISR) missions that lead the segment with cutting-edge systems for the modern battlefield.

Having been acquired by Rafael Advanced Defense Systems and Stolero Aeron Ltd., Aeronautics utilizes the technological synergy between the two companies – Rafael's advanced air, land, and naval defense capabilities and Aeronautics' proven technologies in the Unmanned Aerial Systems and solutions - to strengthen its position as a leading unmanned and autonomous solutions integrator.



Greece approves purchase of Israeli-made missiles

On 10 April 2023, Israel Defence Ministry announced a 1.44-billion-shekel (\$400m) deal to sell Spike anti-tank missiles to Greece. In a statement, the Israeli Defense Ministry said it would provide Greece Spike missiles manufactured by the state-run Rafael Advanced Defense Systems company. It added that the agreement was signed between Israeli Defense Ministry Director-General Maj. Gen. Eyal Zamir and Greece's director of defense investments and armaments, Vice Adm. Aristeidis Alexopoulos. "The Spike missiles will strengthen the Greek army's portfolio of operational tools and we expect further expansion through strategic collaborations in the near future," said Yoav Har-Even, the CEO of state-owned defence contractor Rafael which produces the anti-tank missiles.

On 29 March 2023, the Government Council for Foreign Affairs and Defence (KYΣEA) chaired by the Prime Minister, approved the procurement of SPIKE-NLOS missile system in three different configurations:

- Purchase of 17 SPIKE-NLOS systems with 340 fire-and-forget anti-tank guided missile missiles for an estimated cost of € 270million.
- Purchase of 100 SPIKE-NLOS missiles to equip the AH-64A attack helicopters of the Hellenic Army Aviation for an estimated cost of € 45 million.
- Purchase of four SPIKE-NLOS systems to equip the Hellenic Navy's patrol boats and another four SPIKE ER2 systems to equip the Hellenic Navy's Special Forces operation crafts for an estimated cost of € 55 million.

The SPIKE NLOS 6th Gen Missile rapidly closes the sensor-to-shooter loop, simultaneously neutralizing multiple targets at game-changing stand-off ranges. Real-time tactical intelligence and BDA enable target adjustment and midflight aborting of missions, as well as operation in both offensive and defensive scenarios. Maintaining superiority and creating an effect on the modern battlefield require an array of capabilities including high rate, high precision attacks on multiple targets, close cooperation between mission participants, detailed and updated views of the target, and stand-off ranges sufficient for avoiding today's sophisticated threats. SPIKE NLOS 6th Gen capabilities create a new battlefield reality, increasing lethality, survivability, throughput, efficiency and effect as well as significantly expanding tactical and strategic possibilities.

© Rafael Advanced Defense Systems



From significant weapon systems acquisitions and agreements with allies such as France and the United States, to the fragile relationship with neighbouring Turkey, the implementation of Greece's Defence Policy aims to strengthen the country's deterrence capability.

The Deputy Minister of National Defence Mr Nikolaos Chardalias in an exclusive interview given to the Greek Defence News reports on the latest developments.

Interview with The Deputy Minister of National Defence Mr Nikolaos Chardalias

Greek Defence News: What are the greatest challenges facing Greece's defence policy after the war in Ukraine? Which is the role that Greece has to play?

The international environment, both regional and broader, remains in a state of flux. It is difficult to make accurate projections about the future while the Russian Federation's aggression against Ukraine continues, with no clear end in sight. Even so, Europe and the collective West must prepare themselves for the day after the guns fall silent, however and whenever this may happen. There is a manifest need to start contemplating the post-war security architecture for Europe. Greece, as the last outpost of the West in the East, will continue fulfilling its historical role as a pillar of stability in the Balkans and the East Mediterranean regions. By promoting and deepening our cooperation with our EU and NATO allies, as well as other like-minded partners, we envisionage Greece as the cornerstone of Western security interests in the area.

Greek Defence News: What is the status of the Hellenic Armed Forces' transformation priorities after the significant procurement programs which have already been announced so far?

This government has strived for constructive modernization in every sector of the State. The Ministry of National Defence was not found wanting in this endeavour. We developed a three-fold strategy that can be summarized as follows: Focus in our personnell, modernization of our equipment and infrastructure, evolution as defence apparatus.

The milestone armament programs, such as the procurement of three FDI frigates, twenty-four Rafale fighter aircrafts and 1200 M117 ASV are just an aspect –albeit a very important one– of a concentrated modernization and development effort around those three pillars. A lot of 'quiet' work has also taken place towards the optimization of our organisational capabilities. In particular, I will highlight the formation of the new Force Structure, the foundation of the Space Directorate and the Special Warfare Command, but also the publication of the Armed Forces' Impact Reduction and Climate Change Adaptation Roadmap, the first of its kind in Europe.

Greek Defence News: Would you please comment on the latest developments on the Greek-Turkish Relations?

We have witnessed some encouraging signs from Ankara after the disastrous earthquakes of last February, including a lessening of its provocative rhetoric and activity. Whether this development marks a broader change in Turkish foreign policy remains to be seen. At this point, our priority should be to maintain a stable political environment so that both the Greek and the Turkish people can express their will in the upcoming national elections without fear of an incident between the two countries. If we are succesful, the new governments will be well positioned to explore the possibilities of a resolution for the only outstanding difference between Greece and Turkey, namely the delimitation of the continental shelf/EEZ.

Greek Defence News: How do you assess the current security situation in the Balkans, North Africa and in the Middle East?

For the last year, Eastern Europe has become the focus of worldwide attention, as a result of the hostilities between Russia and Ukraine. However, the security situation remains complicated in many other areas of the globe, including MENA. For example, we have yet to see the conclusion of a long-term compromise to end the dangerous instability in Libya and Syria, the situation in and around Israel remains volatile, while the recent developments in Sudan are extremely worrisome. I believe that the European Union should place more emphasis on facilitating conflict resolution in its courtyard, since the deterioration of relationships with Russia means that its energy and food security is now even more closely connected to the developments in the broader Middle East and North Africa.



Greek Defence News: The Hellenic defence industry is facing a variety of problems, the most important of which is its development. How is the Ministry of National Defence of the Hellenic Republic assisting this target through the implementation of the big armament programs?

For decades, the Greek defence industry, both public and private, was plagued by a variety of problems and flaws. Our government took decisive steps to reverse this regrettable state of affairs, partly by exploiting the internal and external aspects of the recent armament programs. For example, during the negotiations with France for the conclusion of the recent Strategic Partnership Agreement, we insisted in the inclusion of a specific provision for the advancement of cooperation between the defence industries of the two countries.

Building on this clause, contracts were signed between the French company “Naval Group” and Greek subcontractors within the framework of the program for the supply of the three FDI frigates. What’s more, the Hellenic Aerospace Industry, that was in a truly hopeless situation just four years ago, today participates substantially in the upgrade program of our F-16 fleet to the cutting-edge F-16V configuration.

I could mention many other examples that prove the impressive revitalization of our defence industry, like the projects “Architas” and “Gripas” for the production of cutting-edge Unmanned Aerial Vehicles, which are developed on the basis of a public and private partnership. However, I believe that my point is evident: While we will probably not start developing space shuttles any time soon, the Greek national defence industry is back, and it’s here to stay.

Greek Defence News: Which is the Ministry of National Defence’s vision for the Hellenic Armed Forces of the next decade?

From the very beginning of this government’s tenure, the political and military leadership of the Ministry has received a clear mandate from Prime Minister Kyriakos Mitsotakis: Build the strongest Armed Forces in modern Greek history. For four years, the Ministry and the General Staffs have strived for this vision to come into being. The Hellenic Armed Forces are already a deterrent force to be reckoned with and one of the most credible guarantees of peace and stability in the Eastern Mediterranean and the Balkans area. By 2030, after the conclusion of our extremely ambitious armament, reorganization and modernization programs, we expect that their capabilities in every domain will be second to none compared to any other regional actor.

INTRACOM DEFENSE presence in the International Defense & Security Exhibition DEFEA 2023

INTRACOM DEFENSE (IDE) responds to the national defense challenges with state of the art defense systems and integrated solutions in the areas of **Missile Electronics, Tactical IP Communications, C4I Systems, Surveillance, Hybrid Electric Power Systems** and **Unmanned Systems**, which are locally developed and of high national added-value. With advanced production capabilities, highly-skilled and experienced personnel and significant experience in major programs execution, the company can upgrade the Armed Forces operational capabilities in multiple domains, enhance their survivability, reduce the Operational Expenses and Life-Cycle Costs of the main systems and ensure "Follow-on-Support" and "Security of Supply".

In the frame of its participation at the International Defense & Security Exhibition DEFEA 2023, in Athens, between 9-11 of May 2023, IDE presents its innovative defense products, able to contribute to the enhancement of the Armed Forces defensive power.

HEPS® Hybrid Generators (HG)



Trailer Mounted Tactical HGT20K Hybrid Generator

IDE's HG series is an **integrated tactical hybrid power system** combining an optimally sized internal diesel generator, with IDE's advanced **Energy Storage System**, PV panel connections and intelligent Energy Management with microgrid capability. It provides the rated power uninterrupted and takes control over the loads in a programmable manner, without operator intervention, either as a standalone unit or connected to an external generator, a distributed Micro-Grid or the utility Grid.

Hybrid Generators are designed for applications and qualified to military standards, where power

autonomy and sustainment, mobility, signature management and redundancy are critical operational parameters, achieving low fuel consumption, reduced maintenance needs, long unattended intervals and minimal thermal and acoustic trace.

HEPS® Integrated Vehicle Hybrid Power Supply & Management System (Hybrid Genaircon)

The **Hybrid GENAIRCON** is an integrated military vehicle system, providing efficient and uninterruptable hybrid auxiliary electric power with efficient environmental control (Heating, Ventilation, Air-Conditioning - HVAC). The system integrates best-in-class hybrid APU and ECU design with advanced Energy Storage, through the deployment of an intelligent Power Management System & Control and a user friendly central Control Unit with autonomous operation features.

Vehicle electronics, electrically operated mechanisms and Active Protection System can be powered from the on-board Energy Storage System, achieving a unique tactical advantage and enhanced survivability.

The Hybrid **GENAIRCON** system is a modular and platform customizable integrated solution, for applications that require:

- True "Silent Watch" with full operational capability for extended periods.
- Mobile Power sustainment under a wide range of environments.
- Fuel Efficiency, increased combat autonomy and logistical support.
- Environmental control for sensitive equipment and personnel comfort.
- Reduced Maintenance requirements and Lifecycle Cost.

WiSPRevo Communication & Information System



WiSPRevo User Terminal

Designed and developed by IDE, WiSPRevo fulfils all tactical communications and interoperability requirements imposed by the new era of the digital and rapidly developing battlefield and provides:

- Advanced Dynamic Noise Reduction (DNR) for each user achieving unique performance in very noisy platforms, remarkable speech intelligibility and improved crew hearing safety.
- Increased crew performance and combat effectiveness providing the users with maximum situational awareness.
- Accurate and assured digital communications and sensors integration.
- Reliable operation in harsh environment for mission critical applications reducing complexity and maintenance.
- Integrated intercom & external voice communications implementing mission hierarchies, communication plans and crew roles.
- An integrated battlespace communications network using IP protocol and Tactical Intercom technologies.

WiSPRevo is a state-of-the-art Communication and Information system compatible with IP (Internet Protocol) and Power-Over-Ethernet (PoE) technology, it is a highly modular, scalable and expandable system designed based on modern open vehicle architectures and is capable to support and interoperate with existing and future vehicle sub-systems, tactical radios, sensors, actuators along with a wide range of audio or data vehicle ancillaries.

NAUTiCON – Naval Unified Tactical IP Communication Network



IDE's NAUTiCON

Nauticon is a flexible digital communication system, which integrates the internal and the external communication equipment of any modern Naval Platform. It can be configured for distributed switch architecture for survivability as well as for physical separation of red and black information processing.

The system is specially designed to handle integration of various communication types. It provides interfaces to external communications, to HF/VHF/UHF Radio Equipment, to Cryptographic Devices, to Modem Equipment, to Tactical Data

Links, to Public Announcement Systems, to Telephony, to Satellite Communication, to Message Handling System and Ship LAN.

Maritime Interdiction Operations Suite

The iDEFENDER MIO Suite, taking into account the related NATO guidance for conducting maritime interdiction operations, integrates cutting edge systems and technologies that include maritime interdiction software, noise eliminating system for maritime environment, secure wireless wideband communications, surveillance sensors, navigational sensors over a special operations RHIB. The tactical common operational picture is displayed and disseminated in real time to command officers. MIO Suite supports and enables real time video and communications over and through the internal compartments of ships and vessels.

It's worth mentioning that IDE's iDEFENDER MIO Suite participated in "PHOENIX 2018" and in "Biometrics in High Seas NATO 2019" exercises with great success.



Surveillance System MIO Suite

Missile Electronics

IDE has significant experience in the design, development, qualification and production of missile data link and telemetry systems, used either in surface-to-air (**ESSM**), air-to-air (**IRIS-T**) or ground-to-air missiles (**IRIS-T SL**). IDE's innovation in its Data Link designs is based on field-proven knowledge and expertise in designing and implementing state-of-the-art waveforms and protocols as well as in the extended embedded software control capability.

Unmanned Systems

IDE's Tactical Unmanned Platforms incorporate the company's extensive know-how in electronics, communications and integration. They demonstrate high performance, autonomy, robustness, reliability, data/communications security, interoperability, as well as mission versatility. Furthermore, they are designed for safety, easy deployment, operation and maintenance.

The company has full design capabilities over the aerial and surface platforms and subsystems and is able to tailor the systems to specific customers' requirements.

IDE's European Defense Fund Research and Development projects

At DEFEA 2023, IDE presents the **European Defense Industry Development Programs (EDIDP)** which it coordinates: **LOTUS - Low Observable Tactical Unmanned Air System** and **SMOTANET - Software Defined Mobile Ad-Hoc Tactical Network system**.

The **EDIDP 2019 LOTUS** addresses the feasibility, detailed design, prototyping and testing of a low-observable, airworthy and interoperable Tactical Remotely Piloted Aircraft System (TRPAS) targeted at Intelligence Surveillance and Reconnaissance missions. The LOTUS project is funded by EDIDP and the MoDs of Greece and Cyprus and its consortium consists of 11 partners from Greece, Cyprus, Spain and Holland. IDE's main role is to design the data links for Air-to-Air and Ground-to-Air Communications, the ISR architecture and the project's integration.

The **EDIDP 2019 SMOTANET** objectives are to design a modular, adaptive and secure tactical network, designing tactical devices that integrate three different technologies, namely, Software Defined Radio, Mobile Ad-hoc Networks (MANET) and Software Defined Networks and developing testbeds that will be used to test and evaluate operational scenarios and the corresponding technical solutions according to well defined metrics.

The SMOTANET project is funded by EDIDP and its consortium consists of 5 partners from Greece, Cyprus and Poland. IDE's main role is the design and development of SDR and MANET and the project's integration.

Additionally, IDE presents the following programs of **EDF 2021 (European Defense Fund)**, in which participates and which covers both the research and the development capabilities of the defense sector.

The **EDF 2021 NOMAD (NOvel energy storage technologies usable at MilitArY Deployments in forward operating bases)** project, which aims to assess the current energy storage systems that are developed for civil use and that might be used at a military level, addressing the development of an application-oriented analysis, including a guideline recommendation for novel, safe and usable energy storage technologies for military deployments in forward operation bases. The NOMAD consortium, led by EQUIPOS MÓVILES DE CAMPAÑA ARPA

S.A.U. (Spain- SME), consists of 19 partners from 10 EU Member States. IDE's main role is to study and design critical modules of the NOMAD system; leads the work package "Technology Demonstration", while is responsible for one NOMAD Technology Demonstrator.

The project **EDF 2021 INDY (Energy Independent and Efficient Deployable Military Camps)**, which aims to develop a strategic roadmap towards the future energy independent and efficient deployable military camps, based on a paradigm shift for energy production, conversion, storage, transport, distribution and final usage. The INDY consortium, led by TECES Green Tech Cluster, consists of 18 partners from 12 EU Member States.

IDE contributes to study activities for INDY microgrid architectures, Predictive Maintenance, Safety issues in Microgrids and Microgrid Control Strategies.

The **EDF 2021 COMMANDS (Convoy Operations with Manned-unManned Systems)**, which aims at developing Through Life Capabilities (TLC) for agile, intelligent and cooperative manned and unmanned land systems. The COMMANDS consortium, led by SENER AEROSPACE, consists of 21 partners from 10 EU Member States.

IDE develops the COMMANDS Mobile Ad-hoc Networks communication network among the unmanned assets and manned assets which constitute the scenario to be demonstrated.

The **EDF 2021 5G COMPAD(5G Communications for Peacekeeping And Defense)**, which will design, prototype and test a reference architecture for a 5G based robust and resilient multidimensional communications system to demonstrate operational capabilities of 5G integrated in selected defence platforms and systems. The 5G COMPAD consortium, led by Saab, consists of 24 partners from 13 EU Member States.

IDE contributes to study and design activities on 5G COMPAD Secure Framework requirements, on environmental & EMI requirements as well as on TEMPEST requirements for the 5G COMPAD Remote Base Station.

All the above programs are examples of European innovation, with the aim of providing a power multiplier to the Greek and European Armed Forces and **IDE's significant participation ranks the company first in Greece and among the organizations with the highest percentage of participation from all over Europe.**



ITALIAN INDUSTRY SIGNS CONTRACT FOR NEXT DEVELOPMENT PHASE OF 6TH GENERATION AIR SYSTEM

Italian industry signs contract for next development phase of 6th generation air system

- activities that will underpin Italy's participation in the Global Combat Air Program (GCAP) are now underway.
- These will help define the innovative technologies that will deliver a generational leap forward in national defence capabilities.
- The project will generate a positive return for Italy's national industrial ecosystem, drawing on SMEs, start-ups, universities and the world of research.

The team of Italian companies that will participate in the development of the new Global Combat Air Program (GCAP) have signed a contract to support the Italian Ministry of Defense in the program's new concept & assessment phase and related demonstration activities.



The team, which comprises Leonardo - as a strategic partner - and Italy's leading companies in their respective domains: Elettronica, Avio Aero and MBDA Italia, will progress technology development in support of the GCAP "system of systems" concept, based on sixth-generation combat air platforms operating in multi-domain scenarios. Industry will collaborate with universities, research centres, SMEs and start-ups, allowing for the exchange of knowledge and growth of skills at a national level, all in close partnership with the Italian Ministry of Defence. The Ministry will be responsible for defining operational needs and directing technological development, drawing on industry support.

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Aster 30 air defence missile successfully fired from the FREMM DA Lorraine

On Wednesday 22 March 2023 the French Navy's Lorraine multi-mission frigate enhanced with air defence capabilities (FREMM DA) successfully fired the Aster 30 air defence missile.

This type of firing against targets representative of current threats trains crews to deal with the high intensity scenarios the Navy's battleships are likely to encounter during operations. In this case, the task was to neutralise an air threat with a complex trajectory, in an escort scenario involving a valuable ship under threat of missile attack.

Aster missiles, which come in two versions (Aster 15 with approximately 30 km range, and Aster 30 with approximately 100 km range), are carried by multi-mission frigates, air-defence frigates and the Charles de Gaulle aircraft carrier. They will also be carried by the new defence and intervention frigates. The missiles have been specifically designed to destroy attacking aircraft and missiles.

This form of training against top of the spectrum threats helps consolidate the know-how required of a fighting Navy. Firing complex munitions forms part of the POLARIS spirit and reflects the Navy Chief of Staff's (CEMM) commitment to making naval warfare the prime focus of all Navy activities. The many tactical and technical lessons learned from this firing will help develop the French Navy's combat capabilities.

Although the Aster 30 weapon system has already been validated for the FREMM DA (following the Aster 30 firing from the Alsace on 17 November 2021), this recent firing of complex munitions helps confirm the military capabilities of the Lorraine with a view to its entry into active service. The reaction of the FREMM DA crew, who were unaware of the missile trajectory details, was extremely effective. This training highlights the realism demanded in French naval training since POLARIS.

Firing of this type is impossible without support and expertise from the French Defence Procurement Agency (DGA): DGA Maîtrise de l'information (preparation for firing) and DGA Essais de missiles – Ile du Levant launch site (target implementation and safety of the firing range).

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Launched on 13 November 2020 and accepted by the French State in Toulon on 16 November 2022, the FREMM DA Lorraine is the French Navy's eighth and final FREMM and the second to have enhanced air defence capabilities. With its Caïman Marine helicopter, dipping sonar, latest-generation torpedoes and innovative advanced acoustic quieting, the ship has not only been upgraded for underwater warfare but also has enhanced air defence capabilities to ensure air/sea control and the ability to assume air defence command for a force, including during allied operations. 142 metres in length and 20 metres in width, the Lorraine carries a crew of 123.

©French MoD photo



Naval Group launches the first mine countermeasure vessel of the Belgian-Dutch rMCM programme and lays the keel for the third one

On 29 March 2023, the first of the twelve mine countermeasure vessels of the Belgian-Dutch rMCM programme, the M940 Oostende intended for the Belgian Navy, was floated out in Concarneau. The launching ceremony took place in the presence of Ludivine Dedonder, Belgian Minister of Defence, Kajsa Ollongren, Dutch Minister of Defence, and Patricia Mirallès, French Secretary of State for Veterans and Memory. During this day, Naval Group also laid the keel for the third of the twelve vessels, the M941 Tournai, intended for the Belgian Navy.

This programme was awarded in 2019 to Belgium Naval & Robotics, the consortium formed by Naval Group and Exail following an international competition. It provides for the supply to the Belgian Navy and the Royal Netherlands Navy of twelve mine countermeasures vessels and around a hundred drones integrated inside a toolbox that will equip the vessels. The first delivery is scheduled for the end of 2024 in Zeebrugge, Belgium. Deliveries will then be staggered until 2030.

Pierre Eric Pommellet, CEO of Naval Group said: "I am very pleased to be present here in Concarneau at our Piriou partner shipyard, alongside Exail, to celebrate the progress of this unique programme which is the story of a shared vision for the future of mine warfare and European naval defence. We are working together to develop this game-changing defence solution that will serve Belgian and Dutch sovereignty and prepare the future of mine countermeasures in the naval domain."

Ludivine Dedonder, Belgian Minister of defence stated: "In a world in full swing due to geopolitical upheavals, our cooperation is all the more strategic. The operational concept developed by the Belgian and Dutch navies is a world first and revolutionary in several ways. This project, whose first ship is launching today, shows that cooperation, solidarity and innovation are key values for our common security. With this renewal programme for our mine countermeasure capabilities, we can be proud of our contribution to defence innovation, to face the security challenges of our time together."

Naval Group, as overall architect and prime contractor, is responsible for the design of the ships, the overall integration, and the testing and commissioning of the mission system (combat system and mine countermeasures system).

Kership, a joint venture between Naval Group and Piriou, is in charge of the production of the twelve vessels which are assembled in Concarneau and Lanester. Exail Robotics, as co-contractor, is in charge of the unmanned drones' system. Most of these drones will be produced in Exailfactory (Ostend, Belgium). The maintenance of the ships will be carried out in Belgium in close collaboration between the Belgian Navy and Naval Group Belgium, with the assistance of its partner Flanders Ship Repair. The rMCM programme is also a major element of European Defence. This programme demonstrates that European countries can work together to define their needs and share a solution that is destined to become a reference in the mine countermeasures field, not only for the Belgian and Dutch navies, but also for other navies in Europe and around the world.

These mine countermeasure vessels have the following characteristics:

- length: 82,6m
- width: 17m
- displacement: 2800t
- maximum speed: 15,3 knots
- range: >3500 nautical miles
- crew: 63 people (base crew 33 people)
- Combat System: Naval Group Polaris system
- Drone capabilities: Exail UMISOFT System
- 2 unmanned surface vehicles (Exail Inspector 125)
- 3 autonomous underwater vehicles (A-18 equipped with Exail UMISAS 120 sonar)
- 2 towed sonars (T-18 equipped with Exail UMISAS 240 sonar)
- 2 Mine Identification & Disposal Systems (Exail Seascan and K-Ster C)
- 1 unmanned aerial vessel (UMS Skeldar's V200)
- 1 Exail influence mine sweeping system integrating of 5 CTM magnetic modules and 1 PATRIA acoustic module embarkation capacity
- 2 SOLAS rigid hull inflatable boats of 7m



MBDA WINS MAJOR POLISH AIR DEFENCE CONTRACT

MBDA has been contracted by the Polish Armament Agency to supply CAMM missiles and iLaunchers for Poland's PILICA+ air defence upgrade programme.

In total, MBDA will provide missiles and missile launchers valued at £1.9 billion to support Poland's modernisation and manufacture of a total of 22 PILICA+ air defence batteries – making it the largest European short-range air defence acquisition programme in NATO.

Designed by PGZ, PILICA+ will combine MBDA's CAMM short-range radar-guided missiles with Polish-made autocannon and very-short range infrared guided missiles into a triple-layer system commanded by a Polish command and control system and guided by Polish radars. PILICA+ will operate as the inner tier of a highly-capable integrated Polish air defence network also including the upper-tier WISLA system and mid-tier NAREW system, which MBDA is also supporting with PGZ.

Chris Allam, Managing Director of MBDA UK, said: "We are deeply proud that Poland is placing CAMM at the core of their layered air defence systems. This landmark Polish-UK cooperation will provide a major boost to Poland's air defence capabilities and bring our defence industries closer together, enabling sovereignty and supporting jobs in both countries."

CAMM, with its multi-channel, radar-guided, all-weather ability to defeat stressing air threats out to 25 km, will deliver a major enhancement to the capabilities of the Polish PILICA+ system in ensuring the defence of high-value and mobile assets. CAMM first entered service with the UK Armed Forces in 2018, with the CAMM family (including CAMM-ER co-developed with Italy) rapidly proving a success on the international market.

Poland is already a user of MBDA's CAMM, receiving a first battery in 2022 in response to an urgent requirement called mała (small) NAREW that was successfully delivered by MBDA and PGZ in 6 months.



Brigadier General Artur Kuptel, Head of the Polish Armaments Agency (L) and MBDA UK Managing Director Chris Allam (R) ©MBDA

MBDA and PGZ also continue to work towards contracting the technology transfer and Polish manufacture of the mid-tier NAREW air defence programme, utilising the extended range CAMM-ER missile and a common iLauncher solution, and on co-operation on future missiles for higher air defence tiers (through a contract placed in 2022). Poland will benefit from the synergies of operating the CAMM family across multiple domains as these missiles will also equip Poland's future maritime air defence system on-board the Miecznik-class frigates.



MBDA's CAMM missiles and launchers will provide a priority upgrade for Pilica air defence programme ©MBDA

RAFAEL's SPYDER Now Offering Counter TBM Capabilities

Rafael has recently announced that its world-renowned, combat-proven SPYDER air defense system is now enhanced with a sophisticated Counter-TBM (tactical ballistic missiles) capability.

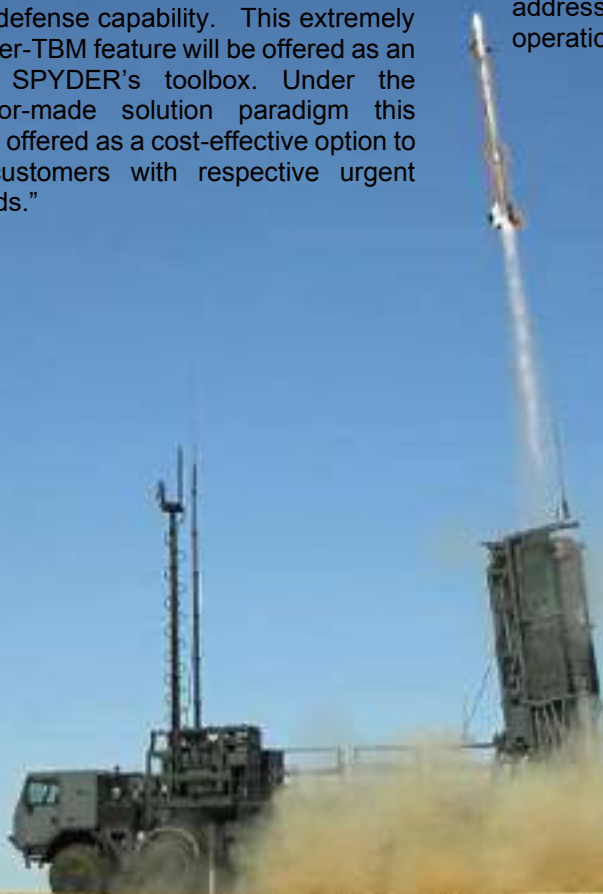
The introduction of this feature is the product of RAFAEL's Counter-TBM SPYDER program, which involved researching and analyzing the lessons learned from recent and ongoing armed conflicts involving extensive use of tactical ballistic missiles. The program has brought about a practical upgrade to the SPYDER system which is equipped for implementation. In response to urgent operational requests from several existing customers throughout the world, the program will extend the capabilities of the SPYDER's effectors as well as the implementation of various Counter-TBM derivatives across the system.

Executive Vice President and General Manager Air & Missile Defense Systems Division Brig. Gen. (Res.) Pinhas Yungman: "RAFAEL is a world-leading expert in the field of missile defense, as evidenced by our top-notch products, such as DAVID'S SLING and IRON DOME. We are proud to announce that our international sales leader – SPYDER – has been reinforced with a tactical ballistic missile defense capability. This extremely important Counter-TBM feature will be offered as an option in the SPYDER's toolbox. Under the SPYDER's tailor-made solution paradigm this capability will be offered as a cost-effective option to our valuable customers with respective urgent operational needs."

The SPYDER Air Defense System is the only Israeli-made air defense system that has been incorporated into the aerial defense array of NATO. SPYDER is a quick reaction, low-level surface-to-air missile system designed to counter attacks by aircraft, helicopters, UAVs, and precision-guided munitions. The system provides effective protection of valuable assets and first-class defense for forces located in the combat area. SPYDER's open architecture allows external components to be easily integrated and flexibly combined, affording different configurations with various ranges and capabilities based on customer needs and priorities. Its autonomous capabilities can detect threats while on the move and enables a 360° launch within seconds of the target being declared hostile, in all-weather, multi-launch, and net-centric capabilities. All the SPYDER systems have multiple target engagement capabilities for handling saturation attacks.

SPYDER systems incorporate the most advanced air-to-air-missiles with proven performance: Rafael's PYTHON-5 dual waveband IIR missile, I-DERBY active radar BVR, and the I-DERBY ER long-range missile, each of which can be used for air-to-air missions. The SPYDER-SR and SPYDER-ER variants provide 360° slant launching missile systems that provide quick reaction, lock-on-before-launch (LOBL), and lock-on-after launch (LOAL) capabilities while extending the range of defense to up to a 40 km radius. The SPYDER-MR and SPYDER-LR offer medium & long-range target interception through vertical launch while pushing the defense envelope up to an 80 km radius. The most recent variant, SPYDER All-in-One, incorporates an integrated radar, Toplite EO/IR sensor, and launcher onto a single platform to address a defense force's individualized, operational needs.

© Rafael



Italian defence companies to further strengthen collaboration with Elefsis Shipyards and the Greek industry

Within the framework of teaming up with the local industrial eco system and strengthening the collaboration between Italy and Greece, Fincantieri and Leonardo have signed a number of further memorandum of understanding (MoU) with potential new Greek suppliers, setting the basis for defining possible long term business relationships. The event took place on 13 February 2023 in Elefsis, where the Onex Elefsis Shipyards is based. This site is the cornerstone of the strategy of Fincantieri if the Group, as prime contractor, will be awarded the program of the Hellenic Navy corvettes pursued by the Hellenic Minister of National Defence.

Thanks to this milestone the involvement of Greek industry, not only referring to the corvette program, continues. Indeed, the Italian team made up of Fincantieri, Leonardo – as system integrator for the Combat Management System and the naval main

sensors, systems and artillery, MBDA Italia and Elettronica, is compact in supporting the development of a large breadth shipbuilding partner with advanced and reliable skills.

After the ones to start a possible supply network in Greece, Fincantieri signed an official agreement with ONEX Shipyards & Technologies Group last December for the creation of a corvettes manufacturing line & their life-cycle support base, that will be located at Onex Naval and Maritime Elefsis Shipyards.

The agreement:

- provides the terms of collaboration for the construction of 2+1 state-of-the-art technology and top-standard corvettes at Onex Elefsis Shipyards along with the necessary upgrades, improvements, know-how & transfer of technology, equipment, which are estimated at approximately euro 80 million.
- is expected to generate the creation of 2.500 direct and indirect new jobs in the shipbuilding industry.
- constitutes a cooperation with multiple benefits for the Greek economy and defense sector, while enhancing the prospect of further cooperation between the two Groups in future construction programs of warships and commercial ships.

The agreement was an important step in the empowerment of the domestic defense production. The know-how that will be acquired through the ONEX-Fincantieri collaboration, that involves the whole Italian industrial ecosystem, will be an important cornerstone for the development of competitive products that will meet the defense requirements of various markets, giving even greater impetus to the rebirth of the Elefsis Shipyards.

© Leonardo



Leonardo brings a holistic approach to maritime security

Continuing to effectively monitor, control and secure the maritime domain, as global threats evolve and technological progress continues to accelerate, is a strategic challenge for all naval forces. Meeting this challenge increasingly requires the integration of different skills and technologies beyond those traditionally associated with the domain. Leonardo operates in and across multiple domains, with capabilities ranging from air defence and weapons systems to defence electronics. With this broad portfolio, Leonardo can bring a holistic approach to the maritime domain, acting as a natural systems integrator.

Leonardo is able to draw on its 60 years of experience as a strategic partner to many international naval forces. The company's systems are on-board more than 1,000 vessels worldwide and, in many cases, make up more than 40% of a vessel's components. Leonardo is currently one of the few companies with a comprehensive naval offer including Combat Management Systems (CMS), kinetic effectors (naval artillery, torpedoes) and missile systems (through MBDA, in which Leonardo has a 25% share) as well as sensors, communications and mission systems. This proprietary technology has been developed through continuous investment in skills and research and honed for operational effectiveness in close partnership with the Italian Navy and other forces around the world.

This strong approach to partnership can be seen in how the Fincantieri-led team is pitching its proposal for the Hellenic Navy corvettes programme, where

if chosen Leonardo will play the role of systems integrator for the corvette's Combat Management System (CMS) and main naval sensors, systems and artillery. Should the team be successful, the partners have committed to supporting the development of Greece's maritime industry, building a firm base of advanced skills in-country. The company has already signed a number of collaborations with potential Greek suppliers, laying the groundwork for long term business relationships within Greece's national industrial ecosystem. The overall ambition is to support in fostering deeper collaboration between Italy and Greece.

This collaboration can also be seen in Greece's adoption of Leonardo's M-346 Master advanced trainer aircraft. The aircraft, today the most advanced solution on the market for the training of latest generation fighters' pilots, has been selected by Greece in the frame of a gov to gov agreement with Israel. The M-346 flew for the first time in full Hellenic Air Force markings in early April, taking off from the Leonardo factory in Venegono, Northern Italy. It will reach soon Kalamata Air Base, home of the 120th Air Training Wing.

Leonardo's partnership with the Hellenic Air Force also encompasses the company's latest defence radar technology, with the Kronos Grand Mobile High Power (GM HP) having been chosen for the NATO range based on the island of Crete. The Kronos GM HP radar will be delivered to the NAMFI (NATO Missile Fire Installation) in 2024 and act as the range's integrated air and missile defence system, ensuring high levels of air safety during exercises. The radar will contribute to high quality training and enable the testing and validation of other system. Like all Kronos family radars, the Kronos GM HP incorporates multi-function and multi-mission capabilities optimised for multiple threats.

© Leonardo's Combat Management

System, for a total maritime awareness



IAI Releases Software Defined Radio System with Innovative Network Centric Operations Capability

Israel Aerospace Industries (IAI), through its defense electronics subsidiary, ELTA Systems, has announced the release of its new multi-mission ARC 840 Software Defined Radio – Network Centric Operations (SDR-NCO) system. The latest product in ELTA's line of military airborne communications systems, SDR-NCO draws on decades of experience in the development of high-performance communications solutions, including advanced Line of Sight (LOS) and AESA satellite terminal systems.

The SDR-NCO provides voice, video and data communications over a comprehensive frequency range including VHF, UHF and L-Bands. It is interoperable with a wide variety of existing military and commercial radios – allowing aircrews to communicate with forces on the ground, in the air, and on the sea, for effective collaboration across a diverse task force.

Going beyond communications, the SDR-NCO is designed to support advanced network applications such as Command and Control, navigation, video sharing, and more. It is fully compliant with the latest SCA 4.1 standard set by the Joint Tactical Networking Center, thereby ensuring future-proof application support. These applications enable the delivery of true multidomain NCO, enabling diverse forces to share information efficiently and achieve mission-critical situational awareness. SDR-NCO provides secure and immune communications, implementing COMSEC, TRANSEC frequency hopping support and LPI (Low Probability of Intercept) techniques, as well as multi-standard GNSS with a Rubidium clock for backup.

SDR-NCO features a flexible and modular architecture. It comprises two user-swappable RF modules, allowing the user to tailor the frequency band combinations that are required for each mission's particular needs. Housed in a compact chassis that fits into the standard 1/2 ATR slot, SDR-NCO is designed for efficient integration with new platforms and allows for the easy upgrade of legacy communications systems.

Adi Dulberg, VP and GM of ELTA's Intelligence, Communications and Electronic Warfare (EW) Division, said, "In the modern battlefield, forces operate in diverse coalitions. The key to mission success is effective collaboration, creating a joint situational awareness for all units in the task force. ELTA's SDR-NCO enables collaboration and Network-Centric Operations through effective communications and shared applications across units and domains."





LYNX KF41

The Lynx KF41 is more than just a new, highly advanced vehicle: it is the ultimate future-proof platform, blending unsurpassed protection with massive firepower and unbeatable mobility in a uniquely modular concept.

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World's first third-generation standoff MMCM capability

While 80% of the world's trade is carried out by sea, roughly 80% of World War I & World War II naval mines have yet to be neutralised or removed. Naval mines are very easy and cheap to build, making them widely accessible. Yet their potential impact on a nation's security and economy is considerable, especially if they are laid in ports, at choke points. Naval mines can potentially paralyze a nation or even an entire global region for some time.

The current geo-political situation highlights the ever-increasing threat of sea mines, which can be used to seriously compromise a country's shipping, its power and communications lines, as well as its naval and civilian maritime activity.

Exail proposes unmanned technologies for MCM keeping personnel and assets away from the minefield - reducing risk and optimising crew and ship safety

Exail is playing an important role in pushing forward the boundaries of traditional warfare by offering a unique standoff approach, enabling navies to safeguard crews and ships by keeping them away from the minefield. At the same time, these unrivalled Mine Countermeasures (MCM) solutions increase the effectiveness and speed of mine warfare operations through the parallelization of missions – the possibility to launch and manage multiple drones in parallel to cover several areas simultaneously, with significant savings of time and resources.

Leveraging 80 years of expertise in the field of naval drones, Exail delivers a customized toolbox, UMIS™, comprised of aerial, surface and underwater autonomous and remotely-operated vehicles. The drones can host a wide range of payloads, according to the navies' mission needs.

Detect – classify – identify – neutralise

UMIS™ the Unmanned MCM Integrated System is an innovative and complete robotic system dedicated to MCM, comprised of Exail naval drones (USVs, AUVs, ROVs,) and towed sonars. Operations are conducted thanks to a single interface, using an advanced Command & Control System as well as a dedicated software suite, UMISOFT™.

Carrying, deploying and recovering autonomous underwater vehicles by surface drones significantly increases navies' range and speed of action, which is otherwise limited by their on-board energy.



© Exail - IT 180 UAV



© Exail - Inspector 125 USV

Sea proven robust, stable and capable of operating in a challenging environment, Exail's USV INSPECTOR 125 is at heart of the UMIS™ system. INSPECTOR 125 enables the transportation, launch & recovery of AUVs and ROVs as well as the deployment of towed sonars and towing sweep systems - formerly reserved for larger crewed vessels.

Advanced, intuitive mission management

UMISOFT™ is a fully integrated software system for the management of MMCM missions, developed by Exail. As the group owns the intellectual property rights to UMISOFT™, it is not dependent on a third-party developer. This reassures Exail customers that their sovereign control will not be compromised.

UMISOFT™, and its functionality, is derived from Exail's 20 years of experience in the development of control and management systems for autonomous naval vehicles. The result is a system that is more than just fit for purpose - it incorporates 2 decades of knowledge, lessons learned and expertise from frontline naval operators. This fully integrated system manages the entire mission including preparation, planning and supervision, drone control, data acquisition, data processing, mission management and post-mission analysis and reporting, for all MCM drones. It provides a unique and consistent interface which greatly improves the operators' efficiency and training.

Sea-proven, customer-driven innovation

In 2019, the Belgian and Royal Netherlands Navies signed a contract with Belgian Naval & Robotics, the consortium comprised of Naval Group and Exail, to acquire a total of 12 minehunter ships and a toolbox composed of around 100 drones. This solution is the first third-generation MCM system and the only fully integrated MCM toolbox of similar complexity designed and optimized to be deployed and operated from a mothership remaining outside the minefield. Of course, UMIS™ can also be deployed directly from the shore in a containerized version.

Interoperable & third-party friendly

Exail's maritime mine countermeasure toolbox is based on an open architecture, meaning it can integrate third-party products and systems, ensuring the customer has the optimum choice of tools from various suppliers and can also integrate the drones it may already have in service.

Robust and operationally ready-to-go

Exail's MCM solutions are rigorously tried and tested, to ensure they are seaworthy and effective even in the harshest environments. These sea proven solutions are already trusted by several navies around the world.

Adaptable – deployable from ships and from the shore

Exail's remote MCM solution is unique in that it can be installed and operated from shore, onboard a specialist naval vessel and on a ship of opportunity, giving the navy increased flexibility and reducing costs by utilising existing resources. A containerised version, UMIS in the Box, can be deployed from ships or directly from the shore. Comprising a dedicated Command & Control container as well as containers for the robots, UMIS in the Box is designed for easy storage and transportation, and fast deployment.

Scalable and evolutive

Depending on the navy's requirements, Exail can provide a light, standalone solution up to a complete, fully integrated system. As the navy's requirements evolve over time, it can add capabilities to ensure that the equipment is best adapted to their needs at the time, and that it always benefits from the latest advances.

Support and training

Integral to Exail's MCM solution, alongside the equipment and software, are the associated support and training. These essential and fundamental elements ensure optimum efficiency, crew safety and continuous operability, whilst enabling navies to fully capitalise on the solutions they have acquired.



© Exail - A18-M AUV



© Exail - Seascan MIDS system



© Exail - K-STER mine disposal vehicle

Arquus and Greece: looking forward to writing a new chapter of the VBL's epic in the Army

Many may know Arquus better under its former names, Renault Trucks Defense, ACMAT and Panhard, although the company has now been present under its new identity for five years. The partnership between Arquus and the Greek Army started in 1997 with the delivery of a first batch of 13 Panhard VBL light armored reconnaissance vehicles.

The VBL has immediately been appreciated for its versatility, mobility and adaptability, which makes it a vehicle of choice for reconnaissance, communications, mobile command post, anti-tank and general-purpose transport missions. Throughout the years, the total number of vehicles delivered have reached 240, making it one of the largest VBL fleets in service in the world. The VBLs have since been serving in foreign deployments, sometimes even shoulder to shoulder with their French cousins.

Since the delivery of the first VBLs to Greece, Arquus is proud to have always been at the side of the Greek army, creating together solutions for training, spares procurement and fleet management. As part of this commitment, Arquus has carried out numerous technology transfers to give the Greek Army operational autonomy for the maintenance of VBLs up to level 5.

As part of the same long-term commitment, Arquus has recently delivered two VBL Ultima to the Greek Army, one of which is on display on Arquus' stand at DEFEA 2023, a vibrant testimony to a quality relationship.

The VBL Ultima is a new standard for the VBL, aimed at further enhancing the capabilities of the vehicle, developed for the French Army and currently being implemented by Arquus in their plant in Saint-Nazaire. A production line has specifically been set to ensure the success of this much expected program for a very demanding client.

Under this new standard, the original 95-horsepower diesel engine is being replaced by a new 130-horsepower diesel engine, as well as a new gearbox, allowing a speed greater than the 95 km/h of the original standard, as well as improved acceleration.

The upgraded VBLs also feature a new Brake Assist System and improved front and rear suspension systems to accommodate increased payload and to improve vehicle handling. Finally, the new standard accommodates air conditioning to improve comfort during operations.

The VBL Ultima has received very good reviews from Greek Army personnel, who have appreciated the increase in mobility, safety, reliability, and comfort, while also granting the vehicle new decades of operational life.

Arquus is looking forward to building on their long-running cooperation with the Greek Army and to offering the Ultima upgrade package to the whole fleet of the VBLs currently in service.

© Arquus- Hellenic Army's VBL





© Arquus- VLRA tactical truck

The upgrade of the VBL Ultima requires a large number of workhours, being a comprehensive package of repair and overhaul, thus comprising in-depth diagnosis of the current vehicles and integration of new systems.

The modernization of the Greek VBLs could take place in Greece at the Army depots or at the facility of a Greek industrial partner with the support of Arquus, to benefit from local know-how and work capacities, as close as possible to the Army bases. The Army personnel who would take part in the upgrade program would also receive the best training to become maintenance experts for the whole life cycle of the VBL Ultima fleet.

This upgrade would not cover the Marine units, which would need to keep their amphibious capability. However, several other units could benefit from the increase in performance offered by the Ultima version.

© Arquus- VBL Ultima

The VBL has recently attracted renewed attention from different countries looking for a new, light, stealthy reconnaissance, and combat vehicle. To address these needs, Arquus has recently unveiled the VBL MK3, a new version of the VBL combining the upgrades of the VBL Ultima and other sensible integrations such as a new dashboard and central tire inflation systems.

As part of the general effort to increase the Greek Army's capabilities, Arquus also offers its VLRA tactical truck. A sturdy, easy-to-maintain, combat proven 4x4 vehicle, the VLRA is a versatile, multi-purpose vehicle designed for the transport of troops, cargo and systems in the most demanding

environments, including mountainous zones and deserts. This new-generation chassis offers high off-road payload capacity and low-cost maintenance thanks to its motorization and transmission without electronics.

The VLRA's proven chassis has also been used for Arquus' bestseller Bastion, a reference in the African markets. In total, more than 1,000 VLRA chassis have been produced, which simplifies the access to spares and creates commonalities.

The VLRA was presented in 2021 at DEFEA and received a very positive welcome for its natural qualities and modularity.

If selected by the Greek Army, it could very well also be produced in Greece at an industrial partner's facility, with the support of the Arquus teams.



OCCAR SIGNS CONTRACT TO LAUNCH GLOBAL PRODUCTION OF ASTER MISSILES INCLUDING THE NEW ASTER 30 B1NT

The OCCAR-EA Director Matteo Bisceglia and the Managing Director of Eurosam Eva Bruxmeier signed the contract for the production of ASTER 30 B1 New Technology, ASTER 30 B1 and ASTER 15 medium range air defence missiles.

The contract was signed in February on behalf of the Direction Générale de l'Armement (DGA) for France and SEGREDIFESA for Italy for the benefit of 5 forces: French Air Force, French Navy, Italian Army, Italian Navy and a new end-user Italian Air Force. This contract concerns especially the procurement of the new version of ASTER 30 B1 NT to deal with future aerial threats speedier and more manoeuvrable.

HORIZON frigates of the Italian Navy. In addition, this contract takes into account the production of new ASTER 30 B1 for SAMP/T NG for Italian Air Force and new ASTER 30 and ASTER 15 for French and Italian Navy.

This complex contract negotiated by OCCAR reached to a conclusion thanks to a strong involvement of EUROSAM and MBDA, as European missile industrial reference, and great cooperation of Nations. With this new contract, OCCAR reinforces the European missile industry supported by MBDA and by major European actors like Thales, Avio, Roxel, Simmel...

This new contract comes in addition to the contract of the Mid-Life Update of the current ASTER stockpile of France, Italy and United-Kingdom placed in 2020 and 2021. With these contracts, OCCAR will provide to the 3 Nations a renewed capacity of Medium Range Air-Defence, contributing at the same time to the European Air Defence system.

FSAF/PAAMS IN SERVICE SUPPORT 2023-2027 CONTRACT SIGNED

FSAF/PAAMS In Service Support 2023-2027 contract has been signed. The FSAF/PAAMS Programme Division achieved the second major milestone of the In Service Support (ISS) contracts renewal, by signing the new ISS#3 contract with EUROSAM, MBDA & THALES for a duration of 5 years (from 2023 to 2027).

Therefore, from the 2nd January 2023, and in line with the previous ISS agreement, the Prime Contractor and his partners have been given renewed responsibility for the supply of Spares and Repairs for the SAMP/T, PAAMS, SAAM/IT, SAAM/FR systems and ASTER munitions, on behalf of OCCAR EA.

With regards to the current geopolitical context, France and Italy have required a higher commitment from industry, with the implementation of some new dedicated activities/services in order to support the increased operational demands on the systems. The FSAF-PAAMS PD was also able to negotiate an additional work package with THALES, to facilitate a contractual upgrade to increase the MRI (Module Radar Identification) operational availability.

The last and equally as important FSAF/PAAMS ISS milestone will be the COTS & Services framework contract, open to European SME (Small to Medium-sized Enterprises) competition, to be signed by August 2023.

©EUROSAM



DEFEA 2023 SHOW DAILY

Elbit Systems Awarded Four Contracts to Supply Solutions to the Romanian Armed Forces



© Elbit Systems SPECTRO XR payload

Elbit Systems Ltd. was awarded four contracts to supply the Romanian Ministry of National Defense with aircraft upgrades as well as electronic warfare suites, electro-optical infrared (EOIR) payloads and Brightnite™ systems for the IAR 300 helicopters.

As part of one of the contracts, the Company will integrate Elbit Systems SPECTRO XR™ payload onto IAR 330 helicopters to enhance the Romanian Navy's operational capabilities. This contract, which follows a successful upgrade of the Romanian Navy's IAR helicopters, will be performed over the coming year.

In a second contract, Elbit Systems will supply a comprehensive electronic warfare (EW) suite including Radar Warning Receiver (RWR), Laser Warning System (LWS), Infrared Missile Warning System (IR MWS) and Counter Measure Dispensing System (CMDS). The suites will be supplied to a domestic supplier for the installation and integration onboard six PUMA helicopters with an option for an additional six in the future.

The contract is a follow-on order to additional EW suites that are already installed on other Romanian Armed Forces' platforms. It will be carried out over a period of three years. The Company will also provide, as part of a third contract, Elbit Systems HDTS type head systems, SPECTRO XR electro-optical systems and an aircraft mission package that includes smart displays, digital maps and reconnaissance systems. Elbit Systems will also supply Brightnite™ systems to IAR Brasov for the Romanian Air Force's Puma 330 SAR helicopters. This contract will be carried out over two years.

The SPECTRO XR multi-spectral electro-optical payload is a leap forward in complex intelligence, surveillance, target acquisition and reconnaissance capabilities. Suitable for today's operational complexity, the lightweight payload system is designed for day-and-night extended-range surveillance under various weather conditions. It also provides continuous target scanning capabilities for enhanced situational awareness.

The BrightNite system is designed to overcome visibility limitations and enable to safely and effectively fly mission helicopters in pitch dark nights and in DVE conditions including poor weather conditions, brownouts, whiteouts and sandstorms.

It transmits high-resolution video to the Helmet-Mounted Display (HMD), enabling pilots to fly in a head-up, eyes-out position. The system can present information to multiple pilots simultaneously on an intuitive multi-functional display.

Under a fourth contract, Elbit Systems will supply advanced avionic suites, live training embedded virtual avionics system, advanced monitors, overhead display, navigation system and weapons activation systems to Avioane Craiova that is upgrading the Romanian Air Force's (RoAF) IAR99 advanced fighter trainer aircraft.

The IAR99 SOIM is an advanced trainer, and the upgrade will support the an effective transition of RoAF pilots to fighter aircraft, including the Romanian Air Force's F-16s. The contract will be carried out over a period of four years. This upgrade program follows a previous contract for the Romanian Air Force's trainer aircraft in collaboration with Avioane Craiova and was awarded approximately 25 years after Elbit Systems first contract to upgrade the IAR99 aircraft.

Ran Kril, Executive Vice President International Marketing & Business Development of Elbit Systems: "These contracts extend Elbit Systems' track record delivering successful projects to the Romanian Armed Forces, including follow-on contracts awarded after Elbit Systems first was contracted to upgrade helicopters and aircraft."

Norway orders state-of-the-art Leopard 2 A7 tanks: Rheinmetall supplying main armament, fire control technology and sensors

Rheinmetall AG has won an important order in connection with a significant NATO main battle tank project. On 17 February 2023 the Norwegian procurement agency NDMA contracted with Krauss-Maffei Wegmann (KMW) to supply the Norwegian armed forces with 54 of the latest version of Leopard 2 main battle tank, the A7 NOR. An option exists for a further 18 tanks. In its capacity as subcontractor to KMW, the Düsseldorf-based tech enterprise Rheinmetall has been tasked with supplying key components. Among other things, these include the tank's 120mm L55A1 main armament, fire control technology and parts of the sensor suite.



© Rheinmetall AG L55A1 Weapon system of Leopard 2 A7

For Rheinmetall, the total value of the order comes to €129 million. If Norway exercises the option to procure additional Leopard 2 tanks, the order will be worth an additional €44 million. The tank guns, fire control technology and sensors for the Leopard 2 will be delivered to KMW during a period of approximately four years. After completion and commissioning of the tanks at KMW, the vehicles will be transferred to the Norwegian procurement agency NDMA. The order underscores Rheinmetall's unsurpassed expertise in the development and production of key components for fighting vehicles. As a subcontractor of KMW, Rheinmetall has already taken part in the delivery of Leopard 2 A5, A6 und A7 main battle tanks prior to the Norwegian 2 NOR programme.

Bundeswehr orders upgrade of 143 Puma infantry fighting vehicles

On 19 April 2023, Germany's Federal Office for Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) has awarded Projekt System & Management GmbH (PSM), a joint venture of Krauss-Maffei Wegmann (KMW) and Rheinmetall, an order to retrofit a further 143 Puma infantry fighting vehicles. In doing so, the German government is exercising two options contained in the contract for retrofitting original Puma infantry fighting vehicles to the new S1 design status.

This contract was signed in June 2021. The order volume is in the region of €770 million. By 2029, the key capabilities of firepower and command and control of all 143 Puma systems will be brought up to date. Exercising these options assures that every Puma in the Bundeswehr inventory will conform to

the uniform S1 design status. Among other things, the retrofit includes integration of high resolution day- and night-capable camera systems, the MELLIS multirole-capable lightweight guided missile system, and digital radio equipment.

© KMW Puma infantry fighting vehicle



NEXTER EXHIBITS ITS RANGE OF PRODUCTS AND SERVICES AT IDEX 2023

As a strategic partner of the United Arab Emirates for 30 years, Nexter is developing its strong integration in the country, particularly regarding the modernisation of the Leclerc tanks of the UAE armed forces. For the first time, JAGUAR and TITUS vehicles were exhibited on the stand of Resource Industries, a key player in the UAE defence industry. Nexter and Resource Industries are exploring the possibility of industrial cooperation around these vehicles.

A historic industrial partnership going forward, Nexter has been working with the UAE armed forces for 30 years when the Leclerc contract came into effect. Nexter is open to new cooperation projects to develop new activities locally. Thus, in close partnership with the UAE's private and public defence ecosystem, Nexter is strengthening and developing industrial cooperation for systems, munitions and services. To this end, Nexter is pursuing the development of a wholly-owned subsidiary – Nexter Emarat Ltd. – which will allow the localisation of engineering and new product development activities.

At IDEX 2023, Nexter exhibited its TITUS and JAGUAR armoured vehicles. The JAGUAR combines the latest generation of optronic

capabilities with multiple and scalable firepower, using the latest 40mm telescoped ammunition and anti-tank missiles perfectly suited for high-intensity combat. The TITUS multi-role armoured vehicle is available in multiple variants with a high level of protection and mobility. It is the subject of discussions between Nexter and the UAE military ecosystem.

Nexter exhibited in IDEX its wide range of products, including armoured vehicles, large and medium calibre artillery systems, ammunition, support services, robots and optronic equipment. Amongst others, the following will be presented in real size:

- The UAE version of the Leclerc tank. Nexter is exchanging views with the United Arab Emirates to continue supporting the Leclerc for the next decades. It is displayed with a new HE multimode ammunition.
- The VBCI MkI, the version in service with the French army and proven in combat on various battlefields. This infantry fighting vehicle, equipped with a 25mm gun, has demonstrated exceptional capabilities in terms of mobility, protection and firepower.
- The CAESAR, the reference in 155mm combat proven artillery, associated with its ammunition produced by Nexter Arrowtech.
- The RAPIDFire, made by Nexter and Thales, is displayed in naval and land versions. The first example of this new turret will enter service this year on a French Navy ship.
- The JAGUAR is presented for the first time at a foreign exhibition. This modern weapon system, which is in service in the French forces since 2021, is manufactured by Nexter, Arcus and Thales. With its 40 CTA gun, Akeron MP missiles and remotely controlled weapon system, it considerably increases the firepower of the French and Belgian light cavalry units. It is displayed on the Resource Industries stand, alongside a TITUS ARX30 specifically configured for counter-UAV warfare.



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New Jersey National Guard Signs Partnership Agreement with Republic of Cyprus National Guard



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On 30 March 2023, Leaders of the New Jersey National Guard and the Republic of Cyprus National Guard formalized their State Partnership Program collaboration at the Presidential Palace in Nicosia, capitol of the Eastern Mediterranean nation. Today's signing ceremony establishes the second formal partnership between New Jersey and another nation's military – enhancing security cooperation between partners, promoting diplomatic ties, encouraging economic development, and strengthening natural disaster and emergency response.

Through the U.S. Department of Defense's State Partnership Program over the past 30 years, National Guard units throughout the United States have conducted military-to-military engagements guided by the U.S. State Department's foreign policy goals. New Jersey's other National Guard partnership with the Republic of Albania has been ongoing for 22 years, helping to enhance cooperation between the partners and advance important national security objectives.

"It is my distinct honor to recognize the beginning of this special military relationship between the New Jersey National Guard and the Republic of Cyprus National Guard," said New Jersey Governor Phil Murphy. "For three decades, the State Partnership Program has demonstrated success all over the world, and I have every confidence that ours will be a rewarding endeavor as well."

The Murphy Administration supported the New Jersey National Guard's efforts to partner with the Republic of Cyprus. The partnership was approved in October 2022 by the United States Department of State and the Department of Defense and will build on the growing partnership between the Republic of

Cyprus and the United States on issues such as maritime security, counterterrorism, and natural disaster and emergency response.

The agreement specifies both National Guards' intent to forge a mutually beneficial relationship founded on the needs and interests of both parties.

"Cyprus – U.S. relations have never been stronger and we are always seeking new avenues for cooperation, in order to further strengthen this strategic partnership," said Republic of Cyprus Minister of Defense Michalis Giorgallas. "We are extremely excited for this new chapter of our evolving and rapidly growing defense cooperation, namely our accession to the prestigious State Partnership Program and our pairing with New Jersey's National Guard."

"We look forward to witnessing what great things will come of the ties forged by this partnership in the coming years," said U.S. Ambassador to Cyprus Julie D. Fisher.

More than 25 leaders from the New Jersey National Guard traveled to the Republic of Cyprus this week to mark the occasion and begin dialogue about the partnership's lines of efforts, as well as ways to develop capabilities in the areas of disaster response support, search and rescue, communications and intelligence, cyber defense, military medical procedures, leadership development, and more.

"Today is just the beginning," said Brig. Gen. Lisa J. Hou, D.O., The Adjutant General of New Jersey and the head of the New Jersey Department of Military and Veterans Affairs. "Our motivation and dedication are never just symbolic. The Soldiers and Airmen of the New Jersey National Guard are ready to get to work – together – with our Cypriot National Guard partners."

HELD UNDER THE PATRONAGE OF HIS EXCELLENCY, PRESIDENT ABDEL FATTAH EL-SISI
THE PRESIDENT OF THE ARAB REPUBLIC OF EGYPT,
THE SUPREME COMMANDER OF THE EGYPTIAN ARMED FORCES



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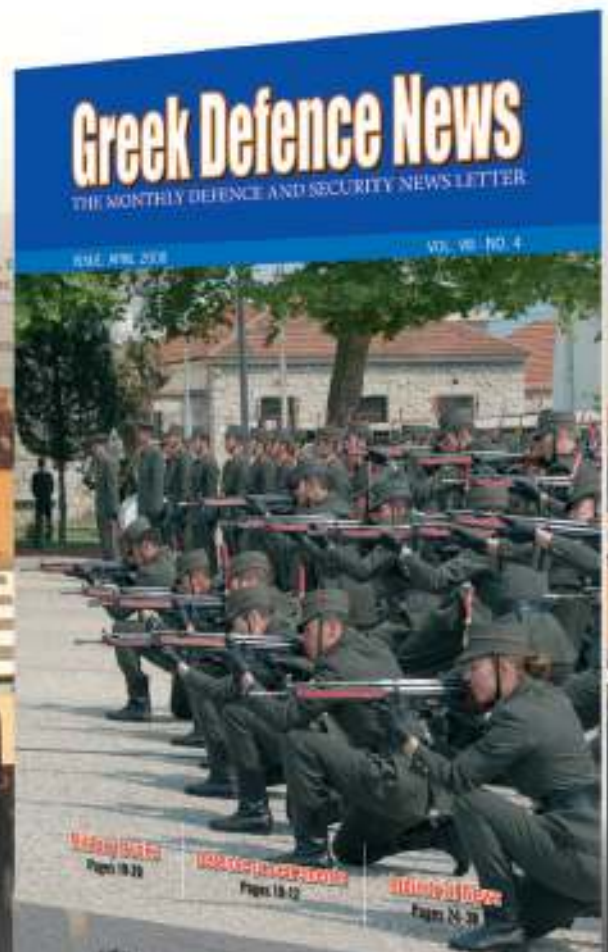
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