ISSUE 35 / JUN-22-16

ESD SPOTLIGHT

Published by MITTLER REPORT

The fortnightly newsletter on developments in the international defence & security environment

European Security & Defence

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MASTHEAD

ESD Spotlight
Email newsletter of the bimonthly magazine "European Security & Defence" (ES&D)

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Photos title story: NATO

MITTLER REPORT
Published by
Mittler Report Verlag GmbH
A company of Tamm Media Group

Mittler Report Verlag GmbH
Baunscheidtstrasse 11
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The company is located in Bonn
District Court of Bonn – HRB 18658
Identification number DE 811 223 089

NATO heading to the Warsaw Summit

General Petr Pavel, Chairman of the NATO Military Committee

The NATO Summit in Wales in 2014 was defined by the challenge to find rapid and effective responses to the Russian use of military means to persue political aims beyond the limits set by international law. The Wales Summit also signalled NATO's ability and preparedness to address all other challenges to Alliance security with an emphasis on the threats stemming from non-state actors emanating from the Middle East and Northern Africa. The Warsaw summit is expected to complete this work and to show NATO's way ahead in a world of dynamic security changes.

In hindsight, Russia's use of the military instrument of power to advance her political ambitions two years ago was not truly surprising in view of the messages given before. The Russian leadership had repeatedly stated in public that Russia's interests were in opposition to those they perceived as the Western (i.e. US, NATO and EU) ambitions in her so-called near abroad. Consequently, Russia had two options – to see her influence drastically diminished by the allure of Western successful societal and economic models, or to deploy her competitive advantages to this quest, which are rapid decision making, the use of military means through hybrid tactics, and effective state orchestrated domestic media support.

The speed of Russia's actions in Crimea and Eastern Ukraine caused much attention, specifically for those nations in Russia's geographical vicinity. In view of their concerns, the Alliance's adaptation decisions in Wales, including the emblematic Readiness Action Plan (RAP), followed two purposes: to assure Eastern Allies of Alliance solidarity and unity through enhanced, albeit rotational presence, and to deter potential aggressors via increased Alliance's responsiveness.

Finding the right balance between these elements - forward presence and responsive forces - has been an ongoing debate within the Alliance since then. Naturally, those nations geographically exposed to potential Russian military aggression strongly advocate deterrence via a multinational forward presence.

Clear message of strength

As NATO's Chiefs of Defence recently recommended a forward presence of four battle groups, one for each of the Baltic States and one in Poland, there is agreement on the shape of this presence. This sends a clear message of strength, decisiveness and, at the same time, of unprovocative modesty in order to leave the door open for dialogue to Russia. There is also a domestic element in this message, of solidarity and cohesion among all Allies, the core of the Alliance's strength.

Regardless of the value of forward presence, the most credible deterrence against the entirety of the dynamic threats surrounding NATO is through the ability to provide mo-

dern, highly-trained, rapidly mobile forces operating at a very high state of readiness. A reinvigorated increased responsiveness model has been implemented and tested with the Very High Readiness Joint Task Force, or VJTF. Established in 2015 shortly after the Wales Summit it is composed of Air, Land, Maritime and Special Forces elements.

A component of the complexity in the contemporary security environment lies in the fact that actors may have simultaneous competing, adversarial, and partially compatible interests. Subsequently, NATO's posture towards the challenges in the East is not only based on deterrence. Deterrence is not a replacement for a strategy, it is just one of several strategic effects. So it is not as clear as "deter or engage" and NATO is not preparing for a new Cold War.

NATO is adapting to a security environment in which the use of military means for political purposes is no longer excluded by some members of the international system and in which non-state actors have the ability to locally challenge the security of well-established state actors.

Victories by inferior competitors

Another part of NATO's adaptation has focused on ways to deal with the so called hybrid warfare. Hybrid confronts us with the paradox of being challenged by weaker competitors or adversaries. Many scholars and military strategists have presented the hybrid nature of Russian military activity in Crimea and Eastern Ukraine as a new phenomenon.

But hybrid warfare is designed just as all other forms of warfare, in line with the traditional Clausewitzian definition of war as "an act of violence intended to compel our opponent to fulfil our will". So it is more a symptom of the changed security environment rather than something genuinely innovative to be addressed separately by a strategy. An aggressor using hybrid means is just bringing his competitive advantages into a conflict.

Hybrid is the way for an inferior competitor to achieve what would have been untenable if he had played according to the rules of international law. Subsequently, he aims to avoid a large-scale response

by other actors and conducts his activities below the threshold of open war. It has been said on various occasions that hybrid needs fruitful ground; it finds breeding ground in places where state and society offer vulnerabilities to be exploited by the hybrid aggressor. Counter hybrid is consequently first and foremost a domestic responsibility.

Hybrid is, as most of the publicly disputed security developments of the recent past, an operational phenomenon, not a strategic one. Per se it does not require a new NATO Strategic Concept.

Strategic Concept

In essence, the 2010 Concept provided for the Alliance's ability to adapt. The Strategic Concept as it stands offers a proper framework for the four Military Strategic Effects that the 28 NATO CHODs agreed to be necessary to translate NATO's strategic superiority into the desired political outcomes. These Military Strategic Effects are: Deter, Contain, Protect and Project. They can be used in isolation, in tandem, or collectively; however, they are always to be embedded in a wider strategic approach levering all instruments of power to achieve a political goal.

The optimal employment of the military strategic effects in concert with all instruments of power would require a strategic framework like the one recently agreed for NATO's further adaptation to the challenges from the South. Such a framework is indeed the link between the Strategic Concept and the existing and potential individual measures that provide granularity to NATO's posture towards the security challenges the alliance is facing.

Challenging NATO-EU relations

There has been consensus for a long time that in a modern world we cannot address security issues country by country. We need a regional and comprehensive approach. Complementarity is a must especially with the European Union, which has impressive, wide ranging diplomatic, economic and financial tools at its disposal. However, complementarity is already a challenge inside the EU, given the complex relationship between the European Union External Action Service responsible for the EU Foreign Policy and the EU Commission which directs, amongst others, the powerful instruments of development and trade.

NATO-EU relations, in addition, continue to be overshadowed by the fact that the EU member Cyprus is not recognized as a state by Turkey.

NATO's projecting stability initiative to be launched at the Warsaw Summit will follow this complementary approach. Based

on the principle that it is more sustainable to enable local forces to protect their own countries than it is to deploy large numbers of own troops, this initiative will focus on building local capacity. The Warsaw Summit will decide if a responsive ready-to-go capability can be built up so that NATO can plan, coordinate and deploy advisory support and training missions faster able to bring together all the necessary tools for capacity building and training.

Resolute Support in Afghanistan

NATO's Resolute Support Mission in Afghanistan is already projecting stability. Since January 2015 NATO has switched to supporting local forces by providing training, assistance and advice to the Afghan National Defence and Security Forces (ANDSF). This recognizes the importance of ANDSF performance in building up Afghan peoples' trust in the future of their state and society. In May 2016 NATO Foreign Ministers endorsed the Chief of Defence's recommendation for an extension of the mission into 2017, acknowledging that the conditions for a significant change of the mission's footprint have not been met.

There is also a growing acknowledgement of the Resolute Support Mission's importance in the strategic context of fighting non-state terrorism. The understanding is that any security vacuum would give terrorism the space to grow, any local reduction in pressure will increase leeway to gain the initiative in other places, as has been clearly demonstrated in Iraq, Syria and Libya. Subsequently, regional and sometimes global repercussions need to be assessed not only where NATO engages but also where the Alliance disengages.

The strategic impact of NATO's operations and missions and their linkage to the other international aims is also reflected through the planned change of NATO's Operation Active Endeavor into a non-article V type of operation. In doing so NATO will be able to complement EU Operation Sofia's efforts in the central Mediterranean with the desired political effect of a more stable Libya and subsequent reduction of migration. Even the long standing KFOR mission in Kosovo has to be seen in the wider aspect of its contribution to regional stability and not narrowed down to the immediate impact it has on Kosovo itself.

On a final note, the focus on operations, enhanced forward presence and high readiness forces should not distract from the fact that supporting NATO's three core tasks – collective defence, crisis management and cooperative security - will always require full spectrum capabilities. The full spectrum includes the totality of joint warfare, all components of land, sea, air, and special operations as well as nuclear and cyber capabilities.

Remaining a nuclear alliance

The issue of nuclear capabilities is gaining importance as a result of Russia's doctrinal incorporation of nuclear weapons as a continuum of capabilities rather than maintaining them separate due to their specific nature. As stated in the 2010 Strategic Concept, "as long as nuclear weapons exist, NATO will remain a nuclear alliance." While the "supreme guarantee of the security of the Allies … provided by the strategic nuclear forces of the Alliance, particularly those of the United States…" is clearly expressed in that document, a subsequent conceptual framework regarding the future composition was not addressed. The Secretary General explicitly mentioned the need for such a framework at the Munich Security Conference when he underlined that "Russia's rhetoric, posture, and exercises of its nuclear forces aimed at intimidating its neighbors" cannot go unanswered.

The Alliance is challenged

In sum the Alliance is challenged. The Russian challenge is the more obvious one, defined by robust capabilities, but to a much lesser extent by a clear intent. Subsequently, the military answer is easier to develop and will consist of the modest but decisive answers described above. Finding the right strategic approach to Russia with its manifold character as opponent, competitor, but also potential partner with its long-standing role as a major power is more a political than a military question.

The southern challenge, in which the intent outweighs the capabilities, is a way more complex challenge – albeit that there is strategic consensus on the character of the threat and the impossibility for dialogue with the leaders behind. The potential military portion of a comprehensive approach that stabilizes nations and their society and economy in a way that encourages people to believe in a future of their own countries is not yet defined. Current engagements are of tactical, local and short-term nature. The debate for the years to come will be about the development of an overarching approach underpinned by strategic patience and levering all instruments of power for the benefit of our mutual security.

NATO's Military Committee is looking forward to substantially contribute to this debate.

Defence

Defence Data published by EDA

(df) The European Defence Agency (EDA) has published their "Defence Data 2014". Just like NATO, which has presented their "Defence Expenditures of NATO Countries 2015" on January 28, 2016, EDA has collected data from their member states and presents it in unified and therefore comparable statistics. As expected the EDA specialists have also found a decline in defence spending in 2014 with budget decreasing to €195 billion, a loss of three percent compared with the €201 billion in 2006.

"Since 2006, defence personnel (military and civilian) has been steadily declining, mainly due to internal restructuring processes," the authors of Defence Data state. "Between 2008 and 2011, this was more evident (-4.9% annual average decrease), possibly due to unfavorable economic conditions. Thereafter personnel numbers continued to fall, thought at a slower pace, a rate of -1.7% per year on average. From 2013 to 2014, total civilian personnel reduced by almost 2% to 400,000, whereas military personnel - by half that (almost 1%) to 1,423,000. During the entire period from 2006 to 2014, total defence personnel shrank by almost 500,000 or 21.4%, where civilian personnel decreased by almost 85,000 or 17.5%, and military personnel – by almost 411,000 or 22.4%."

Even though the number of personnel decreased, this is not reflected in budget. According to the collected data costs per soldier increased from €110,000 in 2006 to €137,000 in 2014.

One interesting result of the data collection is, that European cooperation in the area of Research & Technology (R&T) is declining. While in 2006 only 85.5% was pure national R&T, 9.6% European and 4.9% otherwise collaborative, the number of national R&T rose to 90.7% in 2014, while only 8.6% remained European and 0.6% others. This was accompanied by still shrinking budgets in R&T: "A slight increase (+3.2%) in R&T expenditure achieved in 2013, was lost the year after, as R&T spending dropped by 4.6% (-6.1% in real terms) back to 2012 level of €2.0 billion, the lowest since 2006."

www.eda.europa.eu

Technology

Bids for Challenger 2

(df) BAE Systems announced a major strategic partnership with other defence companies to bid for the UK Ministry of Defence Challenger 2 Life Extension Project. BAE Systems has the design authority. BAE Systems, General Dynamics Land Systems-UK and QinetiQ will be responsible for systems integration and engineering with General Dynamics Mission Systems-International, Leonardo-Finmeccanica (formerly Selex ES Ltd), Moog and Safran Electronics (formerly Sagem) adding their competence in special technologies.

As announced in the 2015 Strategic Defence and Security Review, Challenger 2 will form a key part of the British Army's capability through to 2035. In order to achieve this, several key systems will need to be replaced. "BAE Systems designed and built Challenger 2, we are now excited about the opportunity to use our expertise with the rest of Team Challenger 2 to update and integrate new technology to further extend the capability for the British Army," said Jennifer Osbaldestin, Managing Director of BAE Systems Land (UK).

The work to convert the tanks to the new Challenger 2 Mark 2 standard would be carried out at General Dynamics' factory in South Wales, where the British Army's new AJAX vehicle will start production in 2017.

General Dynamics Land Systems-UK is currently designing and manufacturing the new AJAX vehicle for the British Army, the largest vehicle production programme in the UK. General Dynamics Mission Systems-International supplied systems for the original Challenger 2 and is a major provider to the US Army.

www.baesystems.com
www.generaldynamics.uk.com
www.qinetiq.com

Predicting diseases

(df) DARPA has launched it's new Prometheus programme to predict disease outspreads. Prometheus seeks to discover a minimal set of molecular biomarkers that would indicate, less than 24 hours after exposure to a pathogen, whether an individual will become contagious. That window is narrow enough to allow for early treatment or the initiation of other mitigating steps before a person begins infecting others.

"Many infections are spread by people who haven't yet displayed symptoms of their illness," said Matt Hepburn, the Prometheus program manager. "These people don't know they are sick, so they often end up spreading the disease to close contacts. Our goal with Prometheus is to develop techniques that could alert people that they are likely to become contagious, so they can proactively take steps to keep the disease from spreading."

www.darpa.mil

Supacat's new light reconnaissance vehicle

(df) Supacat's all-new LRV400 Mk2 light reconnaissance vehicle made its European debut in Paris. Designed as a high performance off-road vehicle for rapid intervention operations in harsh environments by special forces, border patrol or strike forces, the LRV400 Mk2 is a highly versatile tactical capability for special forces; it can be transported inside a CH-47 Chinook fully equipped and loaded, making it immediately deployable.

The vehicle also has the unique feature of being convertible from 4x4 to 6x6 to provide a flexible alternative configuration that increases payload, capacity and range to meet different operational requirements.


(Photo: MBDA)

Supacat designed the LRV400 Mk2 to fill the gap for an agile off-road vehicle sized between its HMT Series (GVW 7,600 kg) and quad bikes.

The LRV400 Mk 2 carries a crew of 3 or 4 supported by an operational payload of 1,700 kg with a GVW of 4,200 kg. It can achieve speeds of up to 100mph/160km and operate up to 800 km from the point of insertion, offering special forces a true long range capability.

Having launched and proved the concept in 2012, Supacat evolved the design to develop the LRV400 Mk 2. The significant design change is a move to a well-known, mass produced base automotive platform, adapted by Supacat for specialist military applications. The automotive platform delivers proven performance, reliability and cost efficiencies to the LRV400 Mk2.

www.supacat.com

Denmark chooses F-35

(df) Denmark's parliament agreed to buy 27 F-35 Joint Striker Fighter jets for a total amount of €2.6 billion. The total cost for the lifespan of the deal, assuming some planes last as long as 30 years, would be 55 billion kroner (€7.4 billion), said Henrik Dam Christensen, defense speaker for the opposition Social Democrats. The F-35s will replace old Lockheed Martin F-16s, which Denmark has used since the early 1980s.


(Photo: Lockheed Martin)

Denmark is revamping its fleet at a time when the "world security map has changed," Prime Minister Lars Loekke Rasmussen said when his government proposed going with Lockheed Martin over Boeing's F-18.

In a statement, Lockheed said it's honored by Denmark's decision to go with the F-35. "We stand ready to accommodate Denmark's decision and will continue to work with the U.S. government and the F-35 Joint Program Office to support the procurement of the F-35," the company said.

Denmark is the 11th country to buy the F-35. It has been a development partner in the F-35 program along with the United States and seven other countries: Australia, Canada, Britain, Italy, the Netherlands, Norway and Turkey. Israel, Japan and South Korea are also foreign military customers.

www.f35.com

APKWS laser-guided missiles deployed on F-16s in Afghanistan

(df) The U.S. Air Force has acquired BAE Systems' Advanced Precision Kill Weapon System (APKWSTM) laser-guided rockets for use in ongoing operations in Iraq and Afghanistan. The initial units were fielded to fulfill an urgent operational need for F-16 and A-10 aircraft, which have already used the weapon in combat operations.

"The APKWS fixed-wing fielding has been a true display of joint service and contractor teamwork to quickly deliver a capability to meet Air Combat Command fielding requirements while also exceeding Air Force should schedule timelines," said Brigadier General Shaun Morris, Programme Executive Officer for Weapons, Eglin Air Force Base, Florida.

The deployment marks the first time these systems have been used in combat operations from an Air Force fixed-wing platform.

www.baesystems.com

Fighter trainer roll-out ceremony

(df) The roll-out ceremony for the first of eight Polish Air Force M-346 aircraft took place at Leonardo-Finmeccanica's facility in Venegono-Superiore (near Varese). The first of 8 Aermacchi M-346 advanced trainers ordered by Poland in 2014 will now undergo a flight test programme to certify the systems chosen by the Polish Air Force. It will then be delivered to the customer by the end of the year along with a second aircraft. Deliveries will be completed by November 2017.

The Aermacchi M-346 is one of the most advanced lead-in fighter trainer currently produced and optimised for training pilots to fly latest-generation, high-performance military aircraft. The M-346s will enter into service with the 4th Training Wing Squadron at Poland's Deblin base. With the M-346, the base aims to become an international hub for the training of military pilots.

(Photo: Leonardo)

The M-346 has been ordered by the Air Forces of Italy (18), Singapore (12), Israel (30) and Poland (8) for a total of 68 orders.

www.leonardocompany.com

New DIRCM unveiled

(df) BIRD Aerosystems unveiled their new system: a Directional Infra-Red Counter Measure (DIRCM) system called SPREOS (Self Protection Radar Electro-Optic System). SPREOS is a joint development with a large European Company, combining a radar based sensor (verification) and an active laser (DIRCM) to provide enhanced protection against the threat of Man-portable air defense systems (MANPADS). SPREOS integrates into a single Line Replaceable Unit (LRU) multiple functions, including threat confirmation, tracking and jamming of advanced IR guided missiles.

Upon receiving a warning from the onboard Missile Warning System (MWS), SPREOS slews to the direction and activates the dual band radar function for confirmation and high precision tracking. Following the confirmation and tracking SPREOS deploys the dual-band counter measure laser causing the missile to miss the aircraft.


(Photo: IDF)

www.birdaero.com

New multi-role vessels by Damen Shipyards

(df) During the Oceanographic Survey Vessel Conference in London, Damen Shipyards Group announced the introduction of a new range of Multi-Role Auxiliary Vessels (MRAV).

The company wants to offer a basic platform and therefore reliable and cost-effective multi-role potential and hydrographic survey capabilities.

"The idea behind these vessels is to create a basic platform that can assist in a variety of tasks through the selection of the required mission configuration, e.g. coastal transport, submarine support or coastal infantry operations," said Damen Shipyards Gorinchem's Principal Naval Advisor Jan van der Burg, a retired Vice Admiral of the Royal Netherlands Navy. "The stimulus to switch from traditional one-to-one replacement is to lower the total cost of ownership without losing capability and capacity."


(Graphic: Damen)

With the addition of supplementary modular mission equipment, this new family of Damen vessels should be able to be mobilised in numerous, mainly littoral, naval tasks such as: explosive ordnance clearance and disposal, diving operations, torpedo recovery and overhaul, ROV and UAV deployment, SAR, coastal infantry and submarine support. The largest version will be able to operate worldwide, ocean as well as littoral waters. This ship has additional capabilities like disaster and humanitarian relief, oceanography and naval training support.

The new range of vessels consists of three different designs: the MRAV 660, MRAV 1600 and MRAV 3600. Designed for different geographic profiles, these vessels are respectively 43, 62 and 85 metres long.

www.damen.com

Qatar buys Italian ships

(df) Fincantieri and the Qatari Ministry of Defence have signed a contract for the construction of seven new generation units included in the national naval acquisition programme.

The contract, amounting to approx. €4 billion, envisages the supply of seven surface vessels, of which four corvettes of over 100 meters in length, one amphibious vessel (LPD - Landing Platform Dock), and two patrol vessels (OPV - Offshore Patrol Vessel) as well as support services in Qatar for further 15 years after the delivery of the vessels.

All the units will be entirely built in Fincantieri Italian shipyards starting from 2018, ensuring six years of work and an important impact on the main Italian defence companies.

This success was achieved based on the experience gained by Fincantieri in the construction of high-tech vessels for several renowned foreign navies.

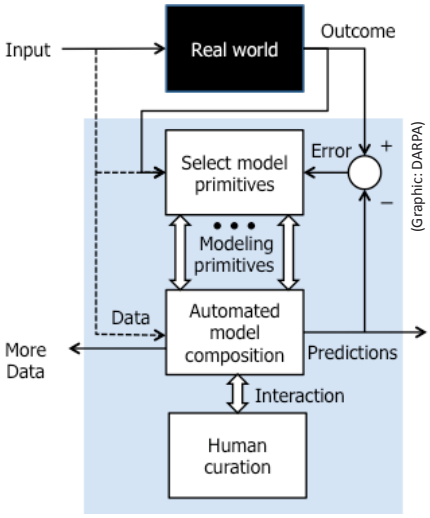
www.fincantieri.com

DARPA goes Meta

(df) Popular search still lack the ability of answering what-if or predictive questions, especially questions that depend on multiple variables, such as "What are the major drivers of environmental stability?" In many cases that shortcoming is not for lack of relevant data. Rather, what's missing are empirical models of complex processes that influence the behaviour and impact of those data elements. The human brain makes these analysis every day, from choosing clothing to driving a car. To give this intelligence to systems – not the human intelligence of course, but maybe that of a cockroach – computers need reliable models that can deliver insights from that raw information which has become an acute limitation for planners.

In order to achieve these goals DARPA just launched its Data-Driven Discovery of Models (D3M) programme. This programme aims to help overcome the gap by enabling non-experts to construct complex empirical models through automation of large parts of the model-creation process. So researchers using D3M tools will have access to an army of "virtual data scientists."

"The construction of empirical models today is largely a manual process, requiring data experts to translate stochastic elements, such as weather and traffic, into models that engineers and scientists can then ask questions of," said Wade Shen, program manager in DARPA's Information Innovation Office. "We have an urgent need to develop machine-based modeling for users with no data-science background.



(Graphic: DARPA)

We believe it's possible to automate certain aspects of data science, and specifically to have machines learn from prior example how to construct new models."

www.darpa.mil

New Dutch security and surveillance system

(df) Thales and Unica have signed a performance based contract with the CDC (Commando Diensten Centrum) of the Dutch Ministry of Defence for a new security and surveillance system at approximately 170 locations in the Netherlands. The system will replace the current 45 operational systems used across all parts of the defence organisation.

The security and surveillance system integrates access-control, intruder detection


(Graphic: Thales)

and nationwide monitoring and control. The new system lives up to the highest standards in security and simplifies operations and maintenance. It will enable the use of the Rijkspas which can be used for access, authentication and identification.

"We are proud of this new contract with the Dutch government and are happy to respond to this challenge with Unica," said Patrice Caine, Chairman and Chief Executive Officer of Thales. "Thales develops innovative, scalable solutions, integrating them into existing infrastructures, even the biggest and most complex systems. For example, Thales has provided the largest integrated urban security system in Mexico City, and protects major airports worldwide such as in Dubai or Doha."

www.thalesgroup.com

CBRN system software

(df) Environics launched a new version of its CBRN system software, EnviScreen Operix, at the 12th CBW Protection Symposium in Stockholm. The EnviScreen Operix 2016 has been developed in the course of the CBRUGS (Chemical, Biological and Radiological Unattended Ground Sensors) delivery project for the Finnish Defence Forces in close cooperation with the military.

The new, modernised software version includes several features and tools that improve the usability and functionality. For instance, selectable application profiles have been added to meet the operator requirements in different applications. The new software release comes with GeoServer map service and some special features related to use in wireless, mobile CBRN detection systems.

The EnviScreen Operix therefore provides real-time situational awareness and guidance in fixed installed and mobile EnviScreen CBRN detection systems. It incorporates sensor integrations, data communication, databases, system services and user interfaces and provides system software solutions suitable both for a single site and full nation covering monitoring networks.

Other key features include selectable application profiles to meet operator requirements in different applications.

www.environics.fi

Milan replacement starts 2017

(df) In line with the initial schedule defined by the DGA (the French procurement agency) in 2013, MBDA has started series production of the MMP (Missile Moyenne Portée = medium-range missile) system. First deliveries to the French armed forces as a replacement for Milan will take place in 2017.

The final development firing of the MMP validated a complex scenario in which the target was hidden at the time of firing and then designated in flight by the gunner by means of the seeker's feedback image supplied via a fibre-optic link.


(Photo: MBDA)

Since the programme was launched some 20 test firings and numerous ground tests have validated the performance required by the French armed forces, such as system resistance and employability in extreme environment and temperature conditions, shooting under infra-red guidance at a long-range target (4,100 metres) or firing in confined spaces, just to name a few.

Notified by the DGA in 2013, the MMP programme will provide 2,850 missiles and 400 firing posts to France starting from 2017. The MMP is a fifth generation land combat missile system ensuring superiority in the battlefield through its versatile warhead and its two firing modes ("direct firing" with "fire-and-forget" or "man- in-the- loop" options, and "indirect firing").

www.mbda-systems.com

Taking down the microdrones

(df) Radio-controlled microdrones repeatedly violate the privacy of people and the boundaries of protected areas. Companies fear industrial espionage, security personnel fears attacks with small pistols attached to the drones. The flying objects can interfere with the safe handling of air traffic at airports. On the other hand shooting down these microdrones can also cause a risk to bystanders, maybe in some cases more dangerous than the drones themselves.

Rohde&Schwarz (R&S) has invented the R&S ARDRONIS radiomonitoring solution so solve this problem. It will allow law enforcement agencies to locate the operator of a remote controlled microdrone and intervene in time. Remote controls for microdrones usually operate in the 2.4 GHz or 5.8 GHz ISM band, but also in other frequency bands e.g. 433 MHz or 4.3 GHz. The R&S ARDRONIS solution monitors the signals in the relevant frequency bands. It has an extensive library of drone control signal profiles in order to detect and classify these types of signals.

R&S ARDRONIS can additionally be equipped with a DF function. The direction information obtained can be used to find the person with the remote control. If the drone transmits a video downlink, this signal will also be located. The information is clearly displayed on a map. Other options are available for R&S ARDRONIS, that for example purposefully interrupt drone control signals to prevent the drone from performing a safety-critical maneuver.


(Photo: Copterflims)

www.rohde-schwarz.com

New drone detection system

(df) ROBIN Radar Systems has selected Dyneema Crystal Technology for the radome of its new Elvira drone detection system. With near-zero signal loss, Dyneema Crystal Technology helps Elvira detect drones and classify them, distinguishing them from birds or other flying objects, at longer distances than traditional radar systems. In fact, this radar technology can detect larger fixed-wing drones at a range of nine kilometers and smaller multi-rotor drones at up to three kilometers.

(Photo: ROBIN)

Elvira was specifically designed for drone detection. After winning a tender from the Dutch Ministry of Justice, ROBIN Radar applied its expertise in tracking small targets to design the new system, which launched in April 2016. Robin radars were also in use with the German drone detection solution at the G7 summit in 2015 in Elmau, Germany, with the German partners ESG (lead) and Diehl Defence (effector)

Elvira provides military-grade radar capabilities, including advanced Doppler processing that enables it to track even the most agile drones. The system is offered at a competitive price that supports broad usage in professional security scenarios, such as protecting high-profile events, airports, harbors, prisons and other critical infrastructures against drones. By combining detection and classification in just one sensor, the technology saves time in the decision process.

www.dsm.com

www.robinradar.com

Fleet management services

(df) Thales and Soframe launched MILFLEET, a set of fleet management services based on predictive maintenance for military vehicles. Designed for land forces in France and around the world, MILFLEET aims to optimise the operational readiness of vehicle fleets, simplifying system and equipment maintenance and reducing operating expenditures for more cost-effective through-life support.

The introduction of latest-generation digital vehicles is speeding up the transition to predictive maintenance practices and the transfer of maintenance responsibilities to

(Photo: Thales)

industry. The platform-agnostic MILFLEET services solution provides an optimised vehicle support organisation and ensures the operational readiness of vehicle fleets.

With individualised management and maintenance of vehicle equipment and systems tailored to the exact requirements of each customer, the services guarantee end-to-end security of vehicle data capture, transfer and analysis.

Thales is contributing with their secure information management technologies by implementing and operating a Health and Usage Monitoring System (HUMS), which collects data from embedded in-vehicle sensors to allow predictive maintenance and ensure that potential faults are detected. Soframe is responsible for weapon system maintenance, delivery of vehicles to the point of deployment and supply chain management for replacement parts.

www.soframe.com
www.thalesgroup.com

New Stiletto mast by Will-Burt

(df) The Will-Burt Company has introduced the Stiletto AL electro-mechanical telescoping mast. The Stiletto family of electro-mechanical telescoping masts provide pointing accuracy and stability along with high payload lifting capability.

The Stiletto and Stiletto HD are lightweight due to the use of composite materials in their construction and have been used in military and commercial applications around the world for a number of years. The new alloy constructed Stiletto AL delivers the same precise pointing accuracy and payload management capabilities as the Stiletto composite mast and is therefore well-suited for military and commercial applications.

The MIL-STD 810 compliant Stiletto AL was designed with several new features, like a low wind deflection delivered with constricting wear bands or the capability for quiet operation from a DC motor driving an environmentally sealed direct-drive system. The mast does not require guying and is self-supporting with high-strength alloy construction. with this it offers a high payload lifting capacity up to 158 kg with patent pending automatic quiet locks and can cover heights from 4 to 15 metres. This comes together with a reduced maintenance from a clean air filter system.

www.willburt.com

Industry & Trade

Airbus DS Electronics and Border Security becomes Hensoldt

(df) The new sensor house, that already made a footprint with its name Airbus DS Electronics and Border Security (EBS), unveiled at Eurosatory its new name Hensoldt. EBS is currently a wholly-owned subsidiary of Airbus Defence and Space.

The Airbus Group has concluded an agreement with the investment company KKR for the sale of shares and will initially transfer 74.9% of the EBS shares to KKR. The agreement is already cleared by the European Commission, and is subject to approvals by the Governments of France and Germany. It is expected to take effect by the first quarter of 2017 at the latest. Thereafter, the company will appear under the brand name "Hensoldt."

EBS combines various Airbus activities from the areas of security and defence electronics and develops innovative products for reconnaissance and intelligence, the protection of soldiers and the creation of situation awareness, taking full advantage of the broad technology basis established by its predecessor companies such as Aerospatiale-Matra, Telefunken, Zeiss and Dornier.

"We bring together all the essential sensor technologies irrespective of a platform under a single roof and, as a result, are able

(Graphic: EBS)

to create exceptionally powerful products in the area of reconnaissance and intelligence," explained the managing director, Thomas Müller, at the press conference in Paris. "In this way, we ensure the operational capability of the Bundeswehr and the allied armed forces and make a decisive contribution to the protection of soldiers."

www.detectandprotect.org

Leonardo chairs European Land Defence Industry Group

The European Land Defence Industry Group, ELDIG, is now chaired by Leonardo-Finmeccanica. President and CEO of Patria Heikki Allonen passed the Presidency to Roberto Cortesi, Managing Director of Leonardo-Finmeccanica Defence Systems Division. The ceremony took place at Eurosatory. ELDIG's Presidency rotates within the Group member companies every second year.

ELDIG serves as a forum for the land systems industry under the AeroSpace and Defence Industries Association of Europe (ASD), which represents more than 3,000 companies from over 20 nations with 792,000 employees. ELDIG is the common voice of the European land defence industry and represents over 100,000 employees.

"ELDIG is an important forum, which promotes the importance of the land sector and strengthens cooperation among main industries, organizations and European authorities and administration. During Patria's chairmanship we at ELDIG have achieved major goals with main stakeholders in the defence sector. We have also established policies and created best practices within the industry. This is a good basis for Leonardo-Finmeccanica to continue the good, ongoing work," highlights Allonen, the former President of ELDIG.

(Photo: Leonardo)

www.asd-europe.org

Joint CEFA, ECA and SCOPEX

Faced with the danger of Improvised Explosive Devices (IED) the military needs a set of specialized equipment to protect their personnel while detecting, identifying and addressing threats.

In order to achieve the required level of effectiveness, this equipment must be available, in perfect working order, and delivered on the ground, as close as possible to the operations.

To meet these requirements, CEFA, ECA and SCOPEX have grouped together to offer an integrated solution created with effective materials and systems to deal with IEDs. All of these systems are stored in a deployable shelter, meaning the EOD (Explosive Ordonance Disposal) & C-IED (Counter Improvised Explosive Device) equipment can be transported directly by road, rail and air to the military zones of operation.

www.cefa.fr
www.ecagroup.com
www.scopex.fr