

High North At The NCI Agency

Dorothee Frank

Last week in Oslo, Norway, the NCI Agency's annual congress "NITEC" took place. Organised by the NATO Agency together with AFCEA Europe, this event brings together NATO representatives and industry. The aim is to better inform both sides, the industry about the procurements and NATO about technological possibilities on the existing markets. "We are here to keep our edge. We want to be a smart buyer. We want to learn from industry, see what is going on and make sure that you know how to engage with NATO and the NCI Agency," stated NCI Agency General Manager Kevin J. Scheid at this year's conference.

The extremely successful event in Norway was also held under the motto "NATO and the High North". Thus, the focus of the main programme was on the High North, while in the panels the various procurement projects of the coming year were presented by representatives of the NCI Agency to the participants, mainly from industry, including for example "Maritime Systems: from Manned to Autonomy", "Business Opportunities: Joint Intelligence, Surveillance & Reconnaissance, Cyber Security, Education & Training", "Business Opportunities: Air & Missile Defence Command and Control, Service Support and Business Applications, Command & Control", "Business Opportunities: Network Services & IT Infrastructure, Core Enterprise Services", "NCI Agency's new E-procurement System", or "Business Opportunities: Network Services & IT Infrastructure, Core Enterprise Services". In each panel, the various sub-programs were presented with the required technologies, the budget, the timeframe as well as contact persons and project managers.

In addition, the participants had the opportunity to reserve background discussions with the speakers via the app. The most important aspect of the congress took place in the panels and reserved meetings. After all, the NCI Agency plans to award €1.4 billion to several contracts within the next 18 months.



Nevertheless, the main programme also featured many highlights. The necessity for NATO to prepare technologically and in training for a conflict in Arctic waters is mainly due to climate change and the resulting new opportunities around the North Pole. The speakers were unanimous in their message that many actors want to take advantage of these opportunities.

"China and other nations are showing increased interest in the High North," said Norwegian Defence Minister Frank Bakke-Jensen in his introductory speech. Russia is also steadily increasing its military presence in the region. At the same

time, the Arctic regions are characterised by special technological conditions. The northern lights, for example, is a challenge for communications. Bakke-Jensen sees Norway's role in providing the necessary infrastructure should NATO troops become necessary. "At the moment, the High North is the only place in the world without broadband. Among other things, Norway will make this broadband available to its military allies in the event of a deployment."

"Climate change also poses challenges for NATO, as the melting ice opens up new shipping routes," stressed Kevin J. Scheid, General Manager of the NCI Agency. This

might potentially lead to new conflicts. “Last year, China declared itself an Arctic state. They want to enforce this with icebreakers and local stations. China also wants to open up new fishing grounds in Arctic waters.” However, the High North is deserted, but not without an owner, since the territories belong to a large extent to NATO nations as well as Russia. China, however, apparently already seems to be asserting its claims with power. “China is currently building two nuclear icebreakers,” says Scheidt.

The participants at the conference agreed that exercises such as Trident Juncture 2018 are absolutely necessary, especially in challenging areas, in order to prepare NATO soldiers for possible deployments on the northern flank as well. Even though

temperatures have risen as a result of climate change, they remain far below the temperatures and weather conditions that are common in other NATO countries. “During Trident Juncture we found that for some countries logistics was a challenge, for some clothing was a challenge and for others the weather,” said Commodore Arne Morten Grønningsæter, Project Coordinator, Joint Force Command Norfolk, NATO. In addition, there would be – depending on the season – the long darkness or brightness as well as the effects of the increasing Russian presence. “In the Arctic we have a very large network of denial systems as part of the Russian BASTION programme,” Grønningsæter described. Accordingly, there is a compelling need for NATO to prepare for the High North. After

all, the territorial independence of Denmark and Norway must at least be guaranteed, whose territorial waters and land masses, including Greenland and northern Norway, extend into the areas of interest to Russia and, more recently, China. However, the conditions of an operation in the High North should not be underestimated. It has little to do with the familiar winters at home. Rear Admiral Thomas Engevall, Director Governance Policies and Plans Office and Deputy National Armaments Director, Swedish Defence Materiel Administration, also described his experiences with Trident Juncture as follows: “The crew of the US carrier fleet USS Harry Truman was slightly surprised how it is to work in the High North.”

www.nitec19.com

Commissioning ZSwKBw

(df) Yesterday, in Euskirchen, Germany, the roll call of the new Zentrum für Softwarekompetenz der Bundeswehr (ZSwKBw) (working title: Bundeswehr Centre for Software Expertise) took place. This is to be seen in the course of the focus on digitisation within the German Armed Forces, whose starting signal was the establishment of the Cyber and Information Domain Service being equivalent to the classical military branches of the armed forces. The centre, which belongs to the Kommando Informa-

tionstechnik der Bundeswehr (KdoITBW) (Bundeswehr Communication and Information Systems Command (BwCISCOM)), now bundles the software expertise of the German Armed Forces. This new centre is to assess, test and evaluate purchased software, to adapt commercial software to the needs of the Bundeswehr and to develop own military software. In total, it is expected to employ about 350 personnel. The employees of the centre will not only develop and test the software at home, but also go on site and into missions.



Cyber Affects NATO's Article 5

(df) During the Cyber Defence Pledge Conference in London last week, NATO Secretary General Jens Stoltenberg said on the effect of cyber and especially cyber attacks on military, governments and people: “NATO leaders have agreed that a cyber attack could trigger Article 5 of our founding treaty, where an attack against one Ally is treated as an attack against all. NATO has designated cyberspace as a military domain, alongside land, sea and air. And at our Summit in Brussels last year, we agreed to establish a Cyberspace Operations Cent-

re at the heart of our military command structure. And we have agreed to integrate national cyber capabilities or offensive cyber into Alliance operations and missions. All of this has made NATO more effective in cyberspace.” Stoltenberg also mentioned a change of strategy opponents have developed. “One of the greatest strengths of the NATO alliance has been our leadership on values, our shared democratic values, our belief in an open society and that has always been our secret weapon. For years authorisation societies have said all this stuff about

values is just a cover for your core national interest, it does not really amount to anything. But they have found a way to attack that values leadership, which is by shaking the confidence of our own populations in democratic processes through activities on cyberspace, where it is possible to influence what people think by use of social media platforms and a range of other techniques.” Stoltenberg continued: “We have to find a way to protect the confidence of our population in our own values.”

www.nato.int

Technology

Formidable Shield 2019

(df) On May 19 the exercise Formidable Shield 2019 ended. Ships from nine NATO countries were taking part in a five-weeks live-fire air and missile defence drills off the coast of Scotland. The exercise follows NATO's decision in 2010 to step up the defence of European Allies from ballistic missile threats. NATO missile defence links Allied sensors and weapons together in a single system. Major components of NATO missile defence currently include U.S. Navy destroyers fitted with the Aegis missile defence system based in Rota, Spain; and a U.S.-operated land-based system in Romania known as Aegis Ashore. Other major components include an early warning radar in Turkey. NATO's air command in Ramstein, Germany is the responsible command.

At Formidable Shield 2019 total of 13 ships, 10 aircraft (with ships and aircraft coming from Canada, Denmark, France, Italy, the Netherlands, Norway, Spain, the United Kingdom, and the United States), and about 3,300 personnel (also from Belgium and Germany) were involved. With these assets the exercise covered a huge area in the North Atlantic – from more than 1,000 km west of the Scottish Hebrides, and from



(Photo: U.S. Navy)

the south of Ireland to the southern end of Iceland.

“Formidable Shield shows how Allies are working together to protect NATO forces and populations from the real threat of ballistic missiles,” said NATO spokesperson Oana Lungescu. “This is one of the world's most sophisticated and complex air and missile defence exercises.”

Defence Secretary Sir Michael Fallon, representing the host nation, said: “North Korean tests have shown the danger of rogue states developing longer range missiles. By hosting this cutting-edge exercise in anti-missile defence with allied navies Britain is at the forefront of developing a more effective response to this growing threat.”

Rear Admiral Paul Bennett, Assistant Chief of Naval Staff (Capability) added the exerci-

se was an excellent showcase for the UK's defensive capabilities: “Formidable Shield is a terrific example of the leading role that the UK plays in development of maritime air and missile defence – protecting our people and working with our allies.”

During the exercise the Standard Missile-3 was also fired at a simulated target. Raytheon's Standard Missile-2 and Evolved SeaSparrow Missile engaged targets simulating anti-ship cruise missiles. “Exercises such as Formidable Shield 2019 provide an opportunity to demonstrate effective collaboration in the battlespace,” said Dr. Mitch Stevison, Raytheon Strategic and Naval Systems vice president. The SM-3 interceptor is used by U.S. and Japanese navies and is operational at a land-based site in Romania.

Protecting Military Satellites

(df) Indra is developing a new radar that should be capable of detecting the approach of hostile satellites that attempt to damage, interfere with or spy on space military assets for the Spanish Armed Forces. According to the company the radar will also monitor the position of spy satellites of other powers and follow the trajectory of ballistic missiles

“The radar that Indra has developed and that continues to evolve for the Spanish surveillance and space monitoring system S3T will offer our country the ability to protect satellites and space assets from un-

intentional threats, such as spatial debris, and deliberate, such as enemy missiles or satellites. Implemented at Morón Air Base, in Seville, it is one of the most powerful radars in Europe and the world, with the capacity to detect objects at altitudes of 2,000 kilometers,” Indra stated. “The radar has already demonstrated its high accuracy in the detection and calculation of the trajectories of objects that orbit out of control in low orbits. The information collected in this case reduces the risk that the International Space Station and satellites in operation might suffer an impact and it increases the safety of new launches.”



(Photo: Indra)

Within these tests Indra's radar detected, just several hours after the event, the cloud of debris that India generated by destroying one of its own satellites, known as Microsat-R, in a demonstration of strength that highlighted the military capabilities of India as a military power.

www.indracompany.com

Military Mobility Programme

(gwh) In the margins of the EDA Steering Committee meeting on May 14, 2019, 23 (out of 28) Member States and the EDA signed a new programme that will facilitate the granting of cross-border permits for ground and air movements. The programme will be developed as part of the EDA's work on military mobility.

The aim of the signed programme is to harmonise the various national rules of the participating Member States. Member States will be enabled to reduce the administrative burden associated with the various authorisation procedures and thus significantly reduce the time taken to issue authorisations for transboundary land and air movements.

One aim are cross border movement permission concerns, meaning the procedures to acquire permission to cross borders and



(Photo: EDA)

is an area where the EU Member States can work together to increase the consistency and/or the effectiveness of their procedures. This EDA programme has been signed by 22 Member States on May 14, 2019. In addition, two Technical Arrangements (TA) will be developed. The arrangements will lay down administrative procedures per transport mode, during crisis times, preparation for crisis, training and day-to-day business. Both TA's describe standard situati-

ons in which the impact for a host nation is reduced to an absolute minimum and required support is minimal or not required. The participating countries are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Spain, and Sweden.

www.eda.europa.eu


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Unprotected Military Transport Vehicles

(gwh) The Bundeswehr calls for the 2nd batch of unprotected military transport vehicles UTF mil worth € 96 m as part of the framework agreement between the Federal Office for Equipment, Information Technology and Utilization of the Armed Forces (BAAINBw) and Rheinmetall MAN Military Vehicles (RMMV). The order covers 161 trucks of the 5 t payload class (ZLK) and 91 trucks of the 15 t payload class (ZLK) and navigation equipment.

In July 2017, BAAINBw and RMMV concluded a framework agreement for the delivery of 2,271 UTF mil with a financial volu-



(Photo: Gerhard Heiming)

me of 900 million euros and immediately called off the first batch of 558 trucks - 339 trucks in the ZLK 5 t (6x6) and 219 trucks in the ZLK 15 t (8x8). The complete delivery of the first batch will be completed within the next few months.

Production of the second batch is to follow immediately and is scheduled to be com-

pleted by the end of 2019. A further 1,461 trucks can be ordered under the framework agreement. A period up to 2024 has been agreed for this.

Fielding of the UTF mil is an important component in the renewal of the Bundeswehr's vehicle fleet. Since 2000, the protected command and multipurpose vehicles (GFF), the first renewals of which are now pending, have been fielded. The protected transport vehicles have been in operation since 2012. Since 2002, BwFuhrparkService GmbH has been providing commercial trucks with special military equipment as a mobility service.

www.bmvg.de

Air Defence In Oman

(df) Indra announced it has completed the deployment of the state-of-the-art AIRDEF air defence system, which is a comprehensive system composed of several components, to the Sultanate of Oman. The

system facilitates to the Oman Air Force the planning, execution and monitoring of military missions, as well as the monitoring and identification of cooperative and non-cooperative aircraft in the airspace under its sovereignty, providing a fully in-

tegrated approach. The system merges intelligence data as well as data from other sources to provide an integrated view of the air situation. The interface has data presentation tools for easy use.

www.indracompany.com

JLTV For Special Forces

(gwh) At the Special Operations Forces Industry Conference (SOFIC), Oshkosh un-

veiled the Joint Light Tactical Vehicle (JLTV) with a special forces mission package.

The vehicle was equipped with a Kongsberg Common Remotely Operated Weapon Station (CROWS), a Javelin Integration Kit (JIK) and a .50 Caliber Machine Gun. The high firepower is complemented by an electronic architecture designed for integration into tactical networks. Despite the high weight of the weapons, the JLTV remains so mobile that it can be used in combat together with the other combat vehicles. The com-

bination of scalability and flexibility makes the JLTV suitable for the unpredictable and evolving mission requirements of special forces.

"The JLTV is a disruptive force booster that enables operators to achieve escalating and de-escalating effects in military operations – from environmental and peace missions to dangerous enemy conditions," George Mansfield, Vice President and General Manager Joint Programs at Oshkosh Defense.

www.oshkoshdefense.com

Fire Control Unit For 40mm Grenades

(gwh) At SOFIC FN Herstal presents the FN fire control unit FCU Mk3. The complete sighting and aiming solution for 40 mm low (LV) and medium velocity (MV) grenade launchers calculates the trajectory of grenades and provides an adapted point of aim which enables the grenadier to achieve first strikes under all conditions



(Photo: FN Herstal)

– day and night. The FN FCU Mk3 consists of a laser rangefinder, a large aiming window for easy target acquisition, sensors for temperature, angles of elevation and cant, a ballistic calculator and a self-adjusting

electronic reticle. It also has a quick detach base through a MIL-STD-1913 interface and a manually operated lever.

Taken together, all these functions contribute to drastically increase the hit probability of the 40 mm grenade system in defence and security operations. The FN FCU Mk3 can be mounted on any rifle or carbine.

www.fnherstal.com

Next Steps In The Long-Range Anti-Ship Missiles Program

(df) BAE Systems is presenting sensor technology for next generation missiles. Working closely with Lockheed Martin to deliver Long-Range Anti-Ship Missiles (LRASM) to the U.S. Air Force, they were achieving Early Operational Capability (EOC) for the B1-B bomber ahead of schedule. BAE Systems' long-range sensor and targeting technology enables LRASM to detect and engage protected ships in all weather conditions, day or night, without relying on external intelligence and navigation data. The Air Force accepted delivery of production LRASM units following suc-

cessful simulation, integration, and flight tests that demonstrated the missile's mission readiness.

"We're quickly delivering critical capabilities to warfighters to meet their urgent operational needs," said Bruce Konigsberg, Radio Frequency (RF) Sensors product area director at BAE Systems. "Our sensor systems provide U.S. warfighters with a strike capability that lets them engage protected, high-value maritime targets from safe distances. The missile provides a critical advantage to U.S. warfighters."

"The advanced LRASM sensor technology builds on BAE Systems' expertise in electronic warfare (EW), signal processing, and



(Artwork: BAE Systems)

targeting technologies, and demonstrates the company's ability to apply its world-class EW technology to small platforms," the company announced. "The successful LRASM sensor programme demonstrates the company's ability to quickly deliver advanced EW technology to warfighters."

www.baesystems.com

Sensor Carrier Nerva For Canada

(gwh) Nexter has been contracted by the Canadian government to supply and logistically support Nerva-LG and Nerva-XX multi-purpose robots. A team of Nexter Robotics and ECA Robotics in France will supply the robots and the Canadian Deltic Group will provide logistical support for the contract,



which is endowed with €4 million. The Nerva multi-mission robot systems are robust and waterproof (IP67) and can be thrown over obstacles. They can be controlled from any standard PC, tablet or smartphone and offer semi-autonomous functions to relieve the operator.



The device weighs 4.5 kg and at 15 cm in height is smaller than a DIN A3

sheet. With a maximum speed of 15 km/h, the Nerva can operate for up to two hours. In built-up areas, the distance between operator and device may be 300 m (in clear visibility up to 1,000 m). As standard, an HD camera provides an image with a forward view supplemented by camera images all around. In addition, a number of sensors (e.g. thermal imaging camera, observation tower, NBC reconnaissance) are available.

www.nexter.fr

Brazil Receives Further Fieldguard

(gwh) As part of the Brazilian Astros 2020 rocket artillery missile system, Rheinmetall will be supplying two further examples of the military Fieldguard 3 measurement system to be implemented by Avibras. The ac-

tive fire control system uses special sensors to measure the trajectory of projectiles in order to ensure the most precise target engagement possible.

Fieldguard 3 can cover a range of up to 100 kilometres. In July 2018, Rheinmetall

received an order from Avibras for four Fieldguard 3 systems with a volume of 20 million euros, to be delivered by the end of 2019. The new order is in the low double-digit million euro range.

www.rheinmetall-defence.com

Anti-Drone System

(df) Indra recently presented its anti-drone system that can operate in an integrated manner with anti-aircraft defense systems to multiply its effectiveness in the protection of military bases and installations. According to the company ARMS (Anti RPAS Multisensor System) increases security because it works both independently and autonomously, and might also be integrated with most anti-aircraft systems.



(Photo: Indra)

"It has the most advanced countermeasures to disrupt and saturate the drone's

communications, along with its location and navigation systems. It also uses spoofing techniques to distort the real GPS signal, hindering or even blocking its ability to navigate," Indra stated.

Indra's ARMS system has already been tested in the area of operations against real threats, in addition to having been acquired by the Ministry of Defense of an Asian country, having confirmed its effectiveness.

www.indracompany.com

Camcopter S100 In The Arctic

(gwh) The Norwegian Andøya Test Center has selected Schiebel's Vertical Takeoff and Landing (VTOL) unmanned aerial system (UAS) Camcopter S-100 for extensive search and rescue tests in the Arctic 2030 project.

The aim of the Andøy Municipality project is to demonstrate the use of VTOL UAS in the Arctic to improve maritime safety. For this purpose, the Camcopter S-100 will be equipped with a gimbal-mounted electro-



(Photo: Schiebel)

optical/Infra-Rot (EO/IR) camera, a PT-8 Oceanwatch payload from Overwatch

Imaging, an Automatic Identification System (AIS) receiver and a Maritime Broadband Radio (MBR) from Radionor. Such a combination of payloads will strengthen emergency preparedness in the region and support search and rescue missions.

Testing is scheduled to begin in autumn 2019, with the UAS being deployed by Norwegian Coast Guard vessels in Andfjord, Norway. Further deployments in Spitsbergen are planned for spring 2020.

www.schiebel.net

Counter Drone At Open Spirit 2019

(gwh) The two-week NATO exercise Open Spirit 2019 included the Harbour Protection Exercise (HPEX 19). Within the framework of HPEX 19, the Lithuanian Navy practiced the protection of port facilities for civil and military seafaring in the port of Klaipeda. The Lithuanian forces were supported by the NATO Center of Excellence for Operations in Narrow and Shallow Waters (NATO COE CSW), the German Seebataillon and the Bundeswehr Technical Center for Ships and Naval Weapons, Maritime Technology and Research (WTD 71).

In this context, ESG demonstrated its modular drone defence system GUARDION in front of numerous high-ranking



spectators. The system was able to safely detect and track a drone launched at sea and classified as uncooperative. In the end, a series of suitable defence devices for the challenging scenario of a port environment was demonstrated.

The mobile or stationary GUARDION drone defence solution is a cooperative project between ESG, Rohde & Schwarz and Diehl Defence, with the components command, control, intelligence/reconnaissance and defence. The solution is open for the integration

of additional sensors and defence measures and can be adapted to the requirements of the respective users.

www.diehl-defence.de

www.esg.de

www.rohde-schwarz.com

Water Transport And Dispensing

(gwh) The Croatian armed forces have ordered a water transport and dispensing container from Thielmann WEW, which will be delivered this year. The Multi Water Tank Container is a self-contained 'drop and go' drinkable water storage and distributi-

on system fitted within a low profile 20ft ISO frame. With integrated heating, pumps and 2.4 kW generator system, the system can handle 150 litres per minute and can be transported on military logistics vehicles with hook lift (Demountable Rack Offload and Pickup System, DROPS). The system re-

quires no site preparation and can provide a stand-alone capability or be integrated into a wider camp infrastructure.

The container will be tested by the Croatian Armed Forces and could lead to a further order for additional units.

www.wew.de

SpaceDataHighway Satellite

(ds) Airbus Defence and Space has successfully launched the second European Data Relay Satellite (EDRS-C) with an Ariane 5 launcher as part of the Copernicus programme. Since the first EDRS-A satellite entered in service in 2016, it has achieved more than 20,000 laser connections, downloading over one petabyte of data. The system transmits data to Earth at a speed of 1.8 Gbps.

The SpaceDataHighway is the world's first optical fibre network in space and is based on state-of-the-art laser technology. The satellites can establish laser connections to reconnaissance satellites up to 45,000 km away, unmanned aerial reconnaissance vehicles (UAVs) or mission aircraft.

The system will consist of three satellites. The third satellite, EDRS-D, will be launched in 2024. It will be equipped with three laser communication terminals to

further increase communication capacity and coverage.

www.airbus.com



(Photo: Airbus)

Ultra Secure Smartphone Made In Finland

(df) Bittium has just launched its new ultra secure Bittium Tough Mobile 2 Smartphone fit for security demands in armed forces, with the police or other security forces. The core of the information security is its multilayered security structure, which is based on the hardened Android 9 Pie operating system, special developed unique hardware solutions, and the information security features and software integrated in the source code. The multilayered information security ensures that both the data stored in the device and data transfer are protected as effectively as possible.

The information security built within the smartphone includes several encryption-, authentication- and key management-re-

lated features, boot and runtime security checks, tamper-proof information security platform as well as a privacy mode. With the privacy switch it is possible to disable microphones, camera and Bluetooth, and the accuracy of sensors is reduced with the touch of a button. Bittium Tough Mobile 2 is compatible with the Bittium Secure Suite software product, which enables remote management of the phones and encrypted data transfer, for example.

Bittium Tough Mobile 2 is fully designed and manufactured in Finland and Bittium ensures supervised and secure manufac-



turing and supply of the smartphones to the customers. Also, the component and software solutions of the phone can be audited for use by authorities. Bittium Tough Mobile 2, together with the Bittium Secure Suite device management and encryption software product, can be certified for the secure use

of different national government officials. As it is a smartphone that has been designed for use by authorities, it has a significantly longer availability and lifespan and better availability of security updates compared to conventional smartphones.

www.bittium.com

Digital Airborne Communications

(gwh) With a new generation of Software Defined Airborne Radios (SDAR) and network-capable waveforms, Rohde & Schwarz is going to the international air show in Le Bourget. Network-capable, broadband waveform applications and the new SOVERON AR family of devices are the basis for information superiority in mission, which is crucial for mission effectiveness and survivability.

The SOVERON WAVE family transmits data and up to two



voice channels in parallel at high speed, with different priorities and with secure encryption algorithms. Within SOVERON WAVE, users can choose the waveform that's best for range, data rate and immunity. Particularly important in this context is the selection of different radio methods that Rohde & Schwarz has developed for the various application requirements.

SOVERON AR was developed based on the internationally standardized Software Communications Architecture (SCA), with a strict separation between device platform and software. Waveform applications from other manufacturers as well as already implemented methods can thus be ported to the radio. This enables backward compatibility with older radio systems and thus safeguards future investments.

A big operational advantage of the airborne solution is certification compliance with both military and civil airborne communications standards. This makes SOVERON AR the only SCA based radio that meets the civil certification regulations of the European Aviation Safety Agency (EASA).

www.rohde-schwarz.de

Hydrogen Fuel Cell Qualified For Outdoor Use

(gwh) Together with adKor, SFC Energy has developed an energy solution based on the Jupiter hydrogen fuel cell. The Jupiter fuel cell hardens the plant's power supply and ensures uninterrupted operation of the communication systems even under the most difficult environmental conditions (e.g. temperatures from -33 °C to +46 °C). After extensive testing at the German Aero-

space Center DLR in Stuttgart, the fuel cell was technically qualified for outdoor use in telecom and BOS digital radio systems.

The Jupiter hydrogen fuel cell expands SFC Energy's extensive product portfolio with energy solutions in the higher power range. With its range of direct methanol and hydrogen fuel cells, the company covers a power range between 40 W and 20 kW and can thus supply highly reliable application-specific remote and backup solutions.



www.adkor.de

www.sfc.com

Tom Arseneault President & COO for BAE Systems, Inc.

(df) BAE Systems announced that Tom Arseneault has been named President and Chief Operating Officer (COO) of BAE Systems, Inc. and appointed to the BAE Systems, Inc. Board of Directors.

For several years, Arseneault has served as COO, responsible for operational performance and delivering key business objectives across the enterprise, to include leading the Inc. Strategy and Corporate Development team. As President & COO, his responsibilities will expand to include

functional leadership of the BAE Systems, Inc. organization.

“Tom has a proven track record leading complex organizations focused on fulfilling critical and technologically challenging missions,” said Jerry DeMuro, CEO, BAE Systems, Inc. “Based on his extensive experience across our international portfolio, this is a natural next step in our efforts to maintain a strong leadership team, and this new reporting structure will streamline Tom’s direct oversight of our business segments and functions for the benefit of our customers.”

In his career Arseneault managed various organisations and programmes for Sanders, a Lockheed Martin Company, and he remained with the unit when it was acquired by BAE Systems in 2000. Then Arseneault held senior leadership roles at BAE Systems, including President of the company’s Electronic Systems sector.



www.baesystems.com

Contract Awarded During The Brno Trade Show

(df) The Czech Ministry of Defence announced during the International Defence and Security Technologies Fair in Brno, Czech Republic, it is awarding a contract

for maintenance of 16 L-159 aircraft in four years to AERO Vodochody AEROSPACE. The total value of the so called PP16 contract - maintenance after 16 years of service - is CZK 1.6 billion (about €60 million)

The PP16 is a second regular maintenance check of single seat L-159s, the first check after eight years of service was performed by Aero in 2009–2013. Besides the necessary maintenance, several upgrades are part of the contract. One of them is adjustment for use of NVG (night vision goggles): adaptation of the cockpit and installation of internal and external airplane lighting (positional, anti-collision and formation lights). Aero cooperates with

the Czech army to make the whole L-159 fleet NVG compatible. All L-159T2 aircraft, which will come to the service of the Czech Air Force in following days, are prepared for training in night vision; adaptation for NVG is also part of upgrade of L-159T1 to T1+.

Another upgrade is installation of ESIS - Electronic Standby Instrument System, able to substitute several standby instruments and provide the pilot with attitude, airspeed, altitude, vertical speed and heading data in the event of a panel failure. Aero installed ESIS already to L-159T1 aircraft operated by the Czech Army.

www.aero.cz

MASTHEAD

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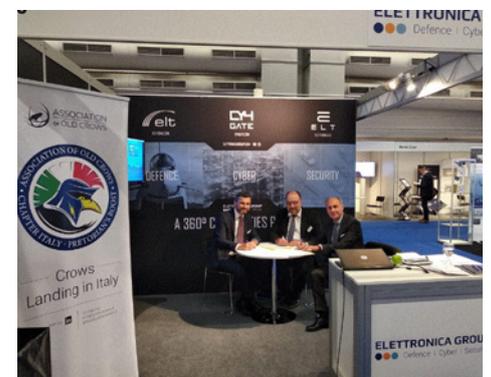
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Cooperation Elettronica And Sphera

During the AOC EW Europe Show in Stockholm, Elettronica and Sphera signed an agreement for a collaboration on EW test solutions for ESM/RWR suites installed on helicopters. With reference to the German NH90 Navy helicopter program, Elettronica is proposing its Radar Warning Receiver ELT 160, already selected by Italian Army and Italian Navy for their TTH fleet, Sphera supplies end-to-end test solutions to be used directly on the platform. Working together shall lead to added value for armed forces, in a first step for Germany and afterwards for other Nations interested in



such testers, too. Elettronica and Sphera are intended to offer to BAAINBw a study in order to analyze the best technical solution for testing the ESM suite of the NH90 Navy.

www.elettronica.de

www.sphera.de

NCT Europe

This year will see the 8th edition of the amazing CBRNe, C-IED, and EOD event, NCT Europe 2019 in Vienna, Austria from June 25 - 27. The collaboration with the Austrian Ministry of Defense guarantees the presence of regional and international stakeholders: from the highest-level decision-makers to civil and military first responders. Whilst passing through the NCT industry exhibition showcasing of novel technologies, take part in the latest discussions on the newest ways to combat ever-evolving CBRNe threats.

June 25 - 27, Vienna, Austria



International Armored Vehicles USA

On June 25 - 27 International Armored Vehicles heads to Austin Texas, the new home of the U.S. Army Futures Command. IAVs USA will provide one of the first opportunities for the leading decision makers on the NGCV programmes, international US allies, platform user groups and key industry stakeholders to collectively discuss the best way forward for the NGCV portfolio in a meaningful way.

June 25- 27, Austin, USA



31st International Helicopter Forum

On July 3 - 4 the helicopter community will gather in Bückeburg, Germany. The Helicopter Centre has invited to the 31st International Helicopter Forum to talk about "New Challenges for Vertical Flight." Session topics will be "Helicopter Operations" and "Technology meets Capability" with a focus on equipment. Representatives from Bell, Sikorsky and Boeing will give insights into their programmes for "Future Vertical Lift." Other sessions on "Rotary UAS and Manned-Unmanned Teaming" as well as on "Training and Education" complete the Forum's presentation programme.

July 3 - 4, Bückeburg, Germany



DSEI Strategic Conference

With DSEI 2019 marking 20 years since its first show, the international defence industry can look at not just how the sector has developed in this time, but also what to expect from the next 20 years. So, it is fitting that the RAF has announced the theme of its first DSEI Aerospace Capability Conference as, "Delivering the Next Generation Air Force".

September 9, London, UK



DSEI

This years DSEI will connect governments, national armed forces, industry thought leaders and the global defence & security supply chain. With a range of valuable opportunities for networking, a platform for business, access to relevant content & live-action demonstrations, the DSEI community can innovate, share knowledge, discover & experience the latest capabilities across the Aerospace, Land, Naval, Security & Joint domains.

September 10 - 13, London, UK



Arms and Security

The XVI international specialised exhibition "Arms and Security – 2019" will be held in Kyiv, Ukraine from October 8 - 11, 2019. The exhibition will have two main parts: weapons and equipment for army and law enforcement, and arms for civilians.

October 8 - 11, Kyiv, Ukraine

