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ESD SPOTLIGHT

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Special Edition

Defence & Security

EUROSATORY 13 - 17 JUNE 2016 / PARIS

European Security & Defence

Eurosatory 2016 in Paris

From June 13th the defence community is again meeting for the Eurosatory exhibition in Paris, as a market place for products and services in the defence arena. According to COGES, the company that organises Eurosatory in cooperation with the French Ministry of Defence, about the same number of visitors and exhibitors are expected as in 2014, that is 200 official delegations from 120 countries.

The international players are well represented at Eurosatory. At present, 1,530 exhibitors have been registered, of which one third is from France. Other large contingents are from the U.S., Germany, the UK, Belgium and The Netherlands. In particular there are companies from Asia that are pushing their market presence. Compared with 2014 the number of exhibitors from China and Korea is twice as large. Also South America and Eastern Europe record slightly increasing exhibitor numbers.

Eurosatory is primarily dedicated to land combat technology including paratroopers, air defence and airborne combat support. In 2014 security technology and disaster management were introduced as new areas. This year the scope will be extended to include a Cyber Cluster showcasing solutions for cyber defence and cyber security.

The exhibition will cover the entire spectrum of equipment for defence and security, at all price levels, from new, complex and state-of-the-art system technology through to economical and proven systems, as they are the preference for a number of users.

Twice a day selected major equipment items will be presented under operational conditions. Vehicles will provide proof of their performance in heavy terrain. Reconnaissance and camouflage systems will be deployed in realistic scenarios. Observers will take advantage of live explanations in accordance with the live demonstrations, supported by a big screen projection.

The exhibition is accompanied by an extensive programme with 60 conferences. The conferences complement the material displays and are to generate momentum for discussions among experts in almost all disciplines.

In essence, development trends have remained unchanged. What is new is a stronger alignment towards changing threats. Protection and communication are priority issues.

- Optical and optronic components and subsystems will feature new high-end performance; in parallel the less expensive sector is expanding.
- Unmanned ground vehicles/robots enter the area of heavy vehicles, including autonomous convoy operations based on "robot kits" for the teleoperation of vehicles in service.
- Mobile broadband satellite communication for military and civilian applications.
- Reduced energy consumption of systems and, in parallel, compact, high-performance and grid-independent energy supply including the use of regenerative energy.

Gerhard Heiming

MASTHEAD

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News from International Armored Group

International Armored Group has earned its reputation as a leading manufacturer of armoured vehicles. Today, vehicles bearing the IAG logo can be found in more than 50 countries in Africa, Middle East, Asia, Europe and North America. With locations in the UAE, USA, Canada, UK, Turkey, Bulgaria, Pakistan, Iraq and South Africa, the footprint is truly global. With combined production capacity of 250 armoured vehicles per month, IAG can meet both small and large scale orders in short time frames.

IAG specialises in the design and manufacture of commercial and tactical armoured vehicles. IAG's tactical vehicles line up was developed as a result of increasing global demand for lighter, more manoeuvrable Armoured Personnel Carriers (APCs) that provide the same level of protection as the bigger, traditional APCs. All IAG APCs are based on existing platforms allowing for worldwide after sales support and service.

At Eurosatory 2016, IAG will showcase its small and medium size APC range including the Sentry, Jaws and Guardian APCs, as well as, civilian armoured Isuzu D-Max pick-up truck and Toyota Land Cruiser SUV.

(Photo: IAG)

The Sentry is a light-weight armoured personnel carrier for border patrol and reconnaissance missions. Its high mobility, great manoeuvrability and survivability make it ideal for both highly dense urban settings, as well as rural theatres. The Sentry APC has a seating capacity of up to 8 personnel. It is based on the conventional Toyota Land Cruiser 79 series. The Sentry's V-hull design is made of high strength, certified steel to protect occupants against blast, IEDs, mines and other explosives. The protective floor of the vehicle also increases the structural rigidity of the platform, preventing the chassis from twisting or bending during extreme off-road use.

Another small size APC solution offered by IAG is the Jaws Armoured Personnel Carrier. Jaws is a tactical vehicle specifically designed and engineered to meet the requirements of a high mobility, light weight armored vehicle for military and law enforcement agencies worldwide. It is well suited for SWAT, patrol and escort missions. With a range of configurations available from RHD, LHD, petrol or diesel engines, manual or automatic transmissions, Jaws is one of the most versatile APCs offered by IAG. Additionally, its level of protection can vary from CEN B4/NIJ Level III-A to CEN B7/NIJ Level IV or STANAG Level II. Jaws can accommodate up to ten fully equipped personnel while providing ample room for weapons and ammunition storage.

The Guardian (photo) is IAG's flagship APC built on a super duty chassis offering high payload and available in 4x4 or 6x6 configurations. Its level of protection can go up from the standard CEN B6/NIJ Level III to CEN B7/NIJ Level IV/.50 cal, as well as STANAG level III with add-on armour. The Guardian APC is available in both low and high-sulphur diesel versions making it deployable in countries where low quality, "dirty" diesel is prevalent. With seating capacity of 10-12 fully equipped personnel, it is ideal for larger teams. Some of the standard options available on the Guardian include a 360° IR surveillance camera system, weapons and ammunition storage, roof escape hatch, rotating spot lights, retractable rear step, high security door locking system and much more.

For more information on IAG and the vehicle range please visit the company during Eurosatory in **HALL 6 J 201**.

www.interarmored.com

WiSENT 2 and PMMC G5 at FFG

(ck) With two tracked vehicles the German tank manufacturer FFG goes to Paris. The focus this year is the multi-role PMMC G5 and the multifunctional platform WiSENT 2.

FFG sold the WiSENT 2 to several countries (Canada, Qatar, UAE and Norway). The WiSENT 2 is based on a Leopard 2 chassis. The tank has a flexible design concept; it is available as a tankdozer and / or recovery tank. Within hours, the WiSENT can be converted from a tankdozer with a modern excavator and dozer blade for more than 400 cubic metres of earth movement per hour into a full-fledged recovery vehicle. As a recovery tank, the WiSENT is capable of using its crane to lift loads of up to 32 tonnes even under armour protection or to pull or draw up to 40 tpnnes by winch. The armoured Protected Mission Module Carrier (PMMC) G5 is a new vehicle concept. The multi-role PMMC G5 is just as safe as the WiSENT when it comes to protection.

During Eurosatory one might visit FFG in **HALL 6 K 652**.

www.ffg-flensburg.de

(Photo: FFG)

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New variants of the famous Jeep

(df) Seventy five years ago, the first prototype Willys Jeep – one of the most famous military vehicles worldwide – was delivered to the US government. Today's reincarnation of the definitive light military vehicle is the Jeep J8, which is already operating in 19 countries around the globe, and has been purchased by the US Department of Defense for use on three continents.

Jeep has appointed Africa Automotive Distribution Services (AADS) as authorised suppliers of the Jeep J8 to selected governmental organisations worldwide. Within this contract AADS is responsible for conversion, accessorisation and armouring of the Jeep J8. This facilitates the provision of all light military requirements on one platform with attendant economies of scale and cost.

During Eurosatory AADS will show four variants: Light Patrol Hard-top, Utility, Armored Patrol and – as remembrance of the famous history – an old Willys Jeep. Also a J8 tactical trailer that was especially designed for military purposes will be part of the exhibition.

Key functions of the Jeep J8 are a towing capacity of 3,500 kg, the heavy payload of 1,160 kg and an extended wheelbase of 2,946 mm, which facilitates a wide range of use for both two and four door versions.

(Photo: AADS)

More special features include 2x2 shackles for helicopter transportation and fastening clips for a secure hood system.

For more information visit AADS during Eurosatory at **Area EXT Pe6a, Aisle D, Number 490**.

www.jeep-j8.com

Iveco LMV 2 and SuperAV

(ck) Iveco Defence Vehicles is presenting two major products from its portfolio at Eurosatory – the amphibious 8x8 SuperAV and the LMV 2.

The SuperAV has been developed in collaboration with BAE Systems for the Amphibious Combat Vehicle (ACV) 1.1 Project of the US Marine Corps. At first 13 vehicles will be produced and tested in 2017.

With selection in 2018, 204 vehicles will be delivered to the troops in 2020. The vehicle's gross weight should not exceed 25 tons, and its speed in water should reach 10 km/h. Eight to twelve people can fit in the protected cabin.

(Photo: Iveco)

LMV 2 is the latest version of the Light Multirole Vehicle, around 4000 of which have been delivered to the customer since 2004.

The LMV 2 has a more powerful engine (160 kW) and an improved payload/weight ratio. Besides protection according to STANAG 4569, other features are central tyre pressure control, air conditioning, smoke launchers and sockets for a remote controlled or manually operated weapon station. Brazil needs 154 vehicles of this class.

Visit Iveco at **EXT Pe6a D 391**.

www.iveco.com

Plasan shows SandCat at Eurosatory

Plasan is showcasing the SandCat at Eurosatory 2016. On display is the newest, most advanced SandCat model, designed for the most challenging missions, and meeting STANAG Level 3 protection within the vehicle's GVW. The Sandcat on display is equipped with an observation system and thermal cameras for full situational awareness.

Plasan will debut their best-of-breed virtual reality (VR) experience to showcase the Sandcat's combat configuration, including advanced, integrated and networked vehicle's electronics. A leader in the design, development and integration of advanced armoured protection solutions for all types of wheeled and tracked vehicles.

Plasan also highlights its TERRA and T-BAR – latest blast protection systems, RPG-protection systems, including Hybrid SlatFence and Flexfence, and Sharp-X liner, a flexible, modular protective liner that increases survivability against bullets spall, RPG spall and IED fragments.

Visit Plasan at Eurosatory in the **outside area at EXT Pe6b E 160**.

www.plasan.com

Highlights at GDELS

(df) One of the highlights of the presentation of General Dynamics European Land Systems (GDELS) will be the Next-generation PIRANHA 3+, that was recently selected by the Swiss Army for its Mortar Carrier programme.

The new PIRANHA 3+ offers a completely modular protection system that has been designed with the flexibility to allow armed forces to meet their current and future protection needs. The modular protection system has been developed to fully protect occupants operating within a complex threat environment.

With a GVW of 27 tons and a payload of up to 10 tons, the new PIRANHA 3+ will, among others, be presented in an Armoured Personnel Carrier (APC) configuration with dedicated seating for a crew of three (driver, gunner and vehicle commander) plus 9 infantry soldiers at Eurosatory.

It will be equipped with the new Oerlikon Fieldranger 20 remote-control gun from Rheinmetall Air Defence. This modern, medium-calibre remote-controlled weapon station provides accurate and high fire power at a range of up to 2,000 metres with a wide range of ammunition types. The Swiss Army has selected the PIRANHA 3+ platform for their Mortar Carrier programme with the RUAG COBRA 120mm Mortar system.

The new PIRANHA 3+ was developed in response to customer requirements for

(Photo: GDELS)

compact vehicles with large and flexible internal volume, high levels of modular protection, excellent off-road mobility and inherent growth capability. The new PIRANHA 3+ incorporates lessons learned from over 11,500 fielded PIRANHA and LAV vehicles around the globe.

Visit GDELS in **Hall 5 Booth G847.**

www.gdels.com

Patria AMV at four stands

(df) Patria AMV will be on view at four stands during Eurosatory. At all sites where an AMV is shown there will be an expert from Patria. The vehicle at Patria's stand – **Hall 6 E353** – is equipped with Selex 12.7mm remote controlled weapon system together with Selex Generic Vehicle Architecture (GVA) compatible electronics.

AMV35 Combat Reconnaissance Vehicle

(Photo: Patria)

(CRV), the vehicle solution by Patria and BAE Systems offered for Australian Army's Land 400 vehicle contract, is featured at BAE Systems' **outdoor stand H30**.

In addition Patria AMV equipped with Cockerill 3000 series 30mm weapon system is on display at CMI's stand in **Hall 5 K378 and K398**.

Rosomak, a Patria AMV produced under license in Poland, is on view at PGZ's stand in **Hall 5 / B 801**.

http://patria.fi

Launch of two tactical combat robots

(df) General Robotics Ltd. unveils at Eurosatory for the first time the DOGO, a lightweight tactical combat robot capable of carrying light weapons. The company also launches Pitbull, an ultra-lightweight weapon station with integral sensors for accurate and fast detection and counter fire capabilities.

Weighing only 12 kilos, DOGO was designed for Special Forces, SWAT teams, and infantry missions, and can manoeuvre across difficult terrain as well as climb stairs. Light weapons can be quickly attached to DOGO and are easily operated (Point& Shoot). DOGO can also integrate with non-lethal modules. The robot includes eight video cameras that provide 360° imagery and boresight views, and it is outfitted with the means to communicate in hostage situations.

They also launch the very lightweight weapon station Pitbull, that only weighs 50 kilos, includes sensor systems that enable accurate detection of hostile fire, and can respond in a matter of seconds. It also includes a miniaturised radar system for detection of targets under harsh weather conditions. These two systems together enable fast and accurate detection regarding the direction of hostile fire, as well as automatic immediate return of fire. Pitbull is easily installed on all types of vehicles and stationary positions, and can be integrated with existing sensor systems.

(Photo: General Robotics)

Visit General Robotics in **HALL 6 D 732**.

www.glrobotics.com

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All-Terrain Vehicles

(df) The Canadian All-Terrain Vehicles (ATV) manufacturer Argo will present special vehicles for extreme environmental condition during Eurosatory. The company focuses especially on amphibious, over-snow and other extreme terrain conditions that military users may encounter, as well as comparative high payload capacity for vehicles within the ATV category. Given an increase emphasis on Arctic Sovereignty missions, the Canadian Armed Forces recently selected the Argo "MIL-XT-AM" model for the country's far north Arctic regions.

(Photo: Argo)

Former "Arctic Mobility Vehicle" Programme Officer, Major (Ret) Jeff Dellalo stated: "We were looking at approximately one Million Canadian Dollar per BVS10 or Bronco. After we did a cost vs. capability comparison, we came to the realization that although we needed 4 x Argo to equal the same capability in terms of equipment and personnel transport, the Argo was 1/20 of the cost."

In addition to Arctic and Over-Snow missions, the vehicle is used by military forces that operate in jungle and swamp terrain conditions, given the vehicles extremely low ground pressure and amphibious capabilities. In 2015 Argo was selected by the Paraguayan Army for counter-insurgency and border security operations. Additional customers choosing the Argo for its performance in jungle and swamp are the European Space Agency's Centre Spatial Guyanais Security Forces, as well as the South African National Defence Force.

See the different Argo ATV during Eurosatory at **EXT Pe6b E 180**.

http://argo-france.com

Unmanned flexible platform for different military scenario

(df) Milrem will be showing it's unmanned ground vehicle THeMIS (Tracked Hybrid Modular Infantry System). The concept of the THeMIS is that all the necessary equipment needed to drive the vehicle is placed inside the tracks. This leaves the area in-between free for different superstructures and gives the vehicle high flexibility and payload capability.

Military uses include armed tactical defence weapon, remote reconnaissance platform, medevac vehicle and supply delivery device. The company recently tested the vehicle during a live military exercise, Spring Storm.

During Eurosatory one of the vehicles will demonstrate it's performance in the Live Demonstration area (a version with a remote weapon system made by Singapore Technologies Kinetics) while the other one will be at the **Estonian Pavilion in Hall 5, Stand J521**. That vehicle is the newest of the family, featuring a completely new technology from a large defence company with details only to be revealed in personal talk at the stand.

(Photo: Milrem)

Visit Milrem at the **Estonian Pavilion in Hall 5, Stand J521**.

www.milrem.ee

Mats for easy recovery

(df) At Eurosatory Musthane presents its new generation of Mustmove DFP, roll-up recovery mats to get vehicles out of sand or mud. The range, designed and manufactured in France, works effectively with all wheeled vehicles in service in the French army and has successfully come through a French Army Staff Armament Programmes Directorate assessment.

(Photo: Musthane)

Mustmove DFP recovery mats allow vehicles to be freed from sand or mud thanks to their anti-skid surface. They are flexible, roll-up mats designed with high-resistance textiles coated with a special polymer. The thin end allows the vehicle to slide easily in the rut and the wider part gets the wheel free. The upper surface is equipped with studs and grooves which improve wheel grip and prevent skidding. Easy to install and remove after use, they are also highly resistant, repairable, impermeable to mud and sand, compact and light (230 x 500 mm rolled-up, for a 2.4 m long mat, weighs 6 kg) and easy to clean, which means they can be re-used immediately if necessary. In most documented cases, vehicles have been recovered in less than 15 minutes using these mats.

Visit Musthane in **HALL 6 H 229**.

www.musthane.com

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Tactical bridges, combat proven and easy to use

(df) Following its recent announcement of a €68 million contract with the Australian Defence Force, tactical military bridge manufacturer WFEL is showcasing its Medium Girder Bridge (MGB) and Dry Support Bridge (DSB) in the **UK Pavilion on stand K692** during Eurosatory.

Being a new-generation tactical military bridging system, WFEL's DSB can get traffic and supplies moving over a 46 metre gap in less than 90 minutes using just eight soldiers and a single launch vehicle.

Already held in inventory by the US, Turkish and Swiss armed forces, the DSB is the longest non-reinforced bridge of its class anywhere in the world and is rated to MLC 120. Using an innovative launching mechanism, the system is versatile and can be adapted to fit to a variety of host vehicles commonly used by armed forces.

The MGB – a classic example of high quality precision engineering that has stood the test of time – first entered service more than 30 years ago, and has played a major role in both military and disaster relief operations, being used by over 40 armed forces worldwide. Under the ADF contract, WFEL will supply double-storey, link-reinforced MGB bridge sets which can span up to 49 metres. These bridges will be supplemented by additional equipment to allow bridges of up to 76m to be constructed, using WFEL's portable pier sets.

WFEL's bridges provide temporary infrastructure and have the potential to be used both in combat situations and in the event of natural disasters. These bridges can be built in less than one hour, either by hand for the MGB or via a semi-automatic process for the DSB.

Visit WFEL in **HALL 5 K 692**.

www.wfel.com

(Photos: WFEL)

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Precision missiles and ammunition from Diehl Defence

(df) Diehl Defence shows a cross-section of its expertise in guided missiles, system solutions for ground-based air defence, guided ammunition as well as protection against unmanned aerial systems at Eurosatory.

One of the highlights is the IRIS-T air-to-air guided missile, the standard armament of 10 air forces worldwide with very high precision and performance. Also the newly developed Laser-Guided Sidewinder air-to-surface missile, that provides air forces enhanced operational capabilities will be shown. The GILA air-to-surface missile completes the mission spectrum for combat helicopters.

Another highlight is the Vulcano guided artillery ammunition, which allows armies and navies pin-point engagement of targets at long distances. This guided missile exists in two variants: An army version of 155 mm and a navy version of 127 mm. With the Vulcano surgical hits are possible with an army howitzer, since the ammunition has a seeker head small enough to fit into a shot glass, but still combining GPS with laser-guidance. Due to this combination the Vulcano does a Circular Error Probable (CEP) of less than one metre.

(Photo: Diehl Defence)

Choosing the infrared sensor instead of the laser-seeker navy vessels can engage moving targets up to a distance of 100 km with an autonomous target approach. In this case the infrared sensor identifies the signature of the enemy in a defined target area, locks on to the object and guides the Vulcano precisely into the target.

Visit Diehl Defence at Eurosatory in the **German Pavilion HALL 6 H 567**.

www.diehl-defence.de

FZ275 LGR Laser Guided Rocket

(ck) At the upcoming Eurosatory Forges the Zeebrugge (FZ) is showcasing a cross-section of its missile systems solutions for modern armed forces. They encompass not only system solutions for air-to-ground 70mm unguided conventional missiles, but they will also be presenting their Laser Guided Rocket FZ275 LGR. The advantage of the laser guidance is its precision to minimise collateral damage.

(Graphic: FZ)

The FZ guided missile closes the gap between long-range high-value missiles and shorter range guns and unguided missiles, thus affording the full range of precision effects from one platform. This missile complies with the armies' requirement for precise and reliable ammunitions capable of reducing exposure to danger and avoiding collateral damage.

FZ275 LGR will offer a Circular Error Probable (CEP) of less than one metre. Due to the Joint Fire Support Team marking the target even moving vehicles progressing at a speed of up to 60km/h can be destroyed. The maximum operational range for the FZ275LGR is roughly 6 km. FZ has a longstanding footprint in defence export markets, supplying 70mm/2.75" air-to-ground missile systems to more than 25 active customers worldwide.

FZ is at Eurosatory in **HALL 6 E 260**.

www.fz.be

Rafael introduces Spike SR

(ck) For the first time at Eurosatory 2016 Rafael Advanced Defence Systems presents the Spike SR – a portable electro-optical missile system for distances of up to 1,500 metres and a new PBF warhead (Penetration Blast Fragmentation).

The new precision munition aims to equip soldiers in urban terrain with a tactical anti-structure capability. The PBF warhead can penetrate enemy cover and explode lethally within the infrastructure.

Spike SR is a fire-and-forget missile. Its weight is 9.8 kg including ammunition. The weapon has an uncooled, electro-optical infrared seeker with modern tracking unlike the gimbaled seeker of the Spike MR / LR / ER series). At the same time the Spike SR offers a High-Explosive Anti-Tank (HEAT) warhead, which can destroy static and moving armoured targets. The minimum distance for engaging tanks is 50 m. The PFB warhead has the same dimensions and the same weight as the HEAT warhead.

(Photo: Rafael)

Visitors can see Rafael at Eurosatory in the **Israeli Pavillion, EXT Pe6b B 221 or in HALL 6 ED 660**.

www.rafael.co.il

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Anti-tank weapons and more

(df) Saab will exhibit a wide range of products, such as the Carl-Gustaf M4, NLAW and RBS 70 NG.

Visitors might try the new generation AT4 (seen in the photo) family of lightweight, shoulder-launched, off-the-shelf support weapons designed in three variants to meet the changing needs of ground forces. Presently in more than 15 countries worldwide, the system is combat proven and provides the extended range required for mission success, including night capability and confined space capabilities.

(Photo: Saab)

The weapon range includes anti-armour, anti-structure and anti-personnel/high explosive roles. With identical handling across all products, the AT4 family offers maximum versatility and ease of use. Another special feature is the red dot sight being an integrated part of the weapon, not a clip on sight just for night firing capability. The big advantage with this integrated, factory mounted and boresighted sight is: only one sight for training and combat in all light conditions.

Another interesting technology at the Saab booth will be the NLAW (Next generation Light Anti-tank Weapon), the latest shoulder-launched, overfly top attack, anti-tank missile system that makes it a good tank killer for light forces that operate dismounted in all environments, including built up areas. Selectable Overfly Top Attack (OTA) against armoured targets and Direct Attack (DA) against non-armoured targets such as vehicles, vessels or enemy troops inside buildings. PLOS (Predicted Line Of Sight) guidance and OTA delivers easy handling, accuracy and high kill probability.

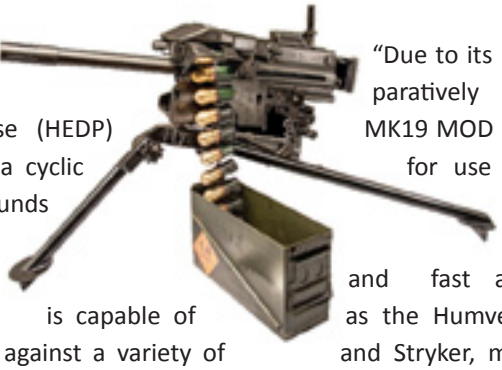
Visit Saab in the **Swedish Pavilion in HALL 6 J 353.**

http://saab.com

Grenade machine gun by US Ordnance

(df) At Eurosatory US Ordnance show their MK19 MOD 3 40mm grenade machine gun. This gun is air cooled and blow-back operated. It features automatic fire as a belt-fed weapon, and offers an angle of fire between 70° elevation and 70° depression.

The MK19 MOD 3 is designed to not cook off because it fires from an open bolt and has a low barrel temperature during rapid fire. It is therefore capable of firing various rounds, such as the M430A1 High Explosive Dual Purpose (HEDP) 40mm grenades, at a cyclic rate of 325 to 375 rounds per minute.



"When employed on the battlefield, it is capable of delivering lethal fire against a variety of targets, including lightly armoured vehicles and dismounted infantry out in the open, in defilade, or in entrenched fighting positions," the company states.

"Due to its low recoil and comparatively light weight, the MK19 MOD 3 has been adapted for use on many different platforms, including small attack boats and fast attack vehicles, such as the Humvee (HMMWV), AAV and Stryker, military jeeps and a large variety of naval mounts."

During Eurosatory visit US Ordnance in the **U.S. Pavilion HALL 5 B 698**.

www.usord.com

155 mm artillery and airburst

(df) At this years' Eurosatory ammunition specialist Nammo focuses on 155 mm artillery ammunition and airburst capabilities. The 155 mm High Explosive Extended Range (HE-ER) can be fired more than 40 km from a modern L52 JBMoU (Joint Ballistic Memorandum of Understanding) gun system.

Low round to round dispersion, combined with an enhanced blast and fragmentation effect, optimises the impact on semi-hard targets at long range. The round is designed to defeat light armour and soft targets, and for increased flexibility incorporates an interchangeable base bleed and hollow base. Nammo's 155 mm HE-ER ammunition is designed to strengthen the artillery.

But since neutralizing the enemy can require more than just artillery and mortars, Nammo has invented their airburst ammunition family. Secure and cost-effective, it its easily integrated with existing weapon platforms.

(Photo: Nammo)

For more information visit Nammo in the **Norwegian Pavilion HALL 6 F 290 or at the stand, HALL 6 GF 304**.

www.nammo.com

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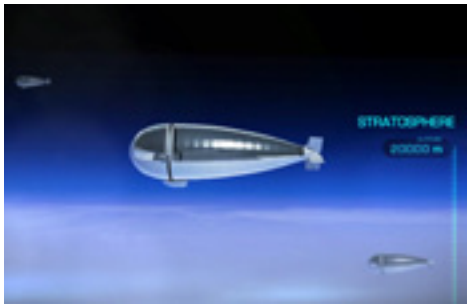
Four key areas at Thales

(df) One of the biggest exhibitors, the European company Thales, will present their solutions in four key areas: force preparation, mission preparation, operational command and combat.

Mission preparation will have several new technologies for the visitor, for example the Squire on tripod, Man Pak Recce or the SPY'Ranger. A very interesting display in this area surely is the Stratobus, a zeppelin-like vehicle halfway between a drone and a satellite, that will be able to carry out a wide range of missions, including observation, security, telecommunications, broadcasting and navigation. It also offers a lifespan of five year. The StratoBus project may immediately call to mind Google's Project Loon. But the advantage of StratoBus is that it offers long endurance and complete autonomy from a fixed position, while the high-altitude balloons in Loon move



around the Earth and will offer only limited autonomy.

In the combat area Thales will showcase a wide range of products serving the troops in combat. For vehicles these will be BMS (DIGIPAC), Eclipse, Comm & C2, Light comm and RCIED protection. This area also focuses on Software Defined Radio (SDR) with the C4i, Vetronique, Contact Véhicule, Contact Soldier and Contact Helico. Of course the main focus in this area is also on soldier equipment, with a SquadNet demo being of special interest. Equipped with unique waveform technology and secured with programmable encryption, SquadNet allows great flexibility and freedom to operate over an extended range. Automatic relaying between radios ensures communication is maintained even across urban, wooded and mountainous terrain where other radios may fall short. In open terrain SquadNet gives a 2.5 km point-to-point range, extending to 6 km with automatic network relaying.

Make sure to visit Thales during Eurosatory at **EXT P3sud A 690**.

www.thalesgroup.com

(Photo & Graphic: Thales)

New range of military tactical radios

(df) A highlight at Eurosatory is the newly launched range of military tactical radios, produced by the Czech company MESIT DEFENCE under the name RF40A. In over twenty years of its existence, this is the third integrated radio system the company has introduced, after RF13 and RF20.

The core of the system consists of a handheld multiband radio in the 30-512 MHz frequency band, with power up to 10 W. The radio supports frequency and amplitude modulation. The antenna connector is TNC type.The radio has a large display, a rotary channel selector, a keypad with a cross-shaped navigation key and a double PTT-button that can be configured for different purposes. Other features include a built-in GPS/GLONASS/Galileo navigation receiver.

Although the RF40 radio system supports VHF and UHF bands, it still puts great emphasis on VHF operation as a robust method of communication with a unique place in tactical communication from battalion through platoon to company command, especially as this is the only band that will hopefully not be threatened by commercial services in the near future, which, over time, take up more and more bandwidth originally intended for purely military use.

(Photo: MESIT DEFENCE)

WF40 is a full MANET waveform with built-in multiple automatic rebroadcasting for voice and data. Up to two independent voice connections can operate in one channel along with a parallel data transfer. Transmission capacity for user data is up to 270 kbit/s for data in UDP packets. Information in radio transmission is secured using TRANSEC technology and the AES block cipher with the key length of 256 bits.

Within the transmissions required for maintaining information on ad-hoc network topology, positional location information (PLI) of all radio nodes is transmitted simultaneously, which are then usable for Blue Force Tracking and easily viewable via any C4I system.

In addition to the new WF40 waveform, the RF40 radio is equipped with other operation modes, such as STANAG4204, HW20 or MIL-STD-188-220, thus providing full backward compatibility with previous RF13 and RF20 radio systems.

Visit MESIT DEFENCE in the **Czech Pavilion in HALL 5 KJ 577**.

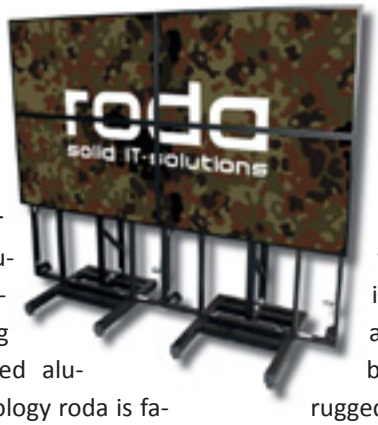
www.mesitdefence.cz

2016
EUROSATORY
13 - 17 JUNE 2016 / PARIS
Defence & Security

Rugged solutions for the military by roda computers

(df) The German specialist in rugged computers and associated technology, roda, will showcase it's wide range of products for the military customer at Eurosatory. One of the highlights will be the full rugged HEL4.0 video wall that unites unique and patented technology not presented before.

The HEL4.0 is the next generation of full rugged video walls and follows the successful and combat proven HEL2.0, which has been in service in quite harsh environmental surroundings. It was tested and proven against MIL-STD-810F for water, sand, frost, heat, shock and drop. The user can choose either touch or pad operating. Together with the high-resolution display and independent operating software the hardened aluminium case, a technology roda is famous for, makes the HEL4.0 a crucial tool for command posts or situation rooms, providing an easy to use and understand display for critical data being created by different sensor and information systems.



Of course roda will show their other proven products as well. From the Rocky rugged notebooks and Panther tablets-PC, which are generally mounted in protected vehicles, vessels and aircrafts, to their more mobile technologies, like the full rugged mobile server in Laptop form named Lizard RW11.

Visit roda computers in the **German Pavilion in HALL 6 L 603.**

http://roda-computer.com

Robust, embedded computers

(ck) Kontron, a manufacturer of Embedded Computer Technology (ECT), presents at EUROSATORY its scaleable, open-architecture COTS solutions that include reliable modules, boards and ready-to-use platforms. Kontron will also present its newest Multicore HPEC solutions.

Solutions from Kontron allow developers to consolidate their efforts, on a single machine by running virtual machines in parallel and achieve high performance and I/O bandwidth for simulation or operation of military applications.

The robust embedded computing solutions support the company's reliable PCI Express Gen3 standard and ten Gigabit Ethernet between all backplane boards throughout the operating range of rugged computing designs.

Some of Kontron's highlights at Eurosatory are the COBALT 901 with enhanced I/O options that have been developed specifically for the needs of defense applications, and a high performance SWaP-C optimized Cobalt 901, which is based on multi-core processors plus new development kits that streamline its use.

Visit Kontron during Eurosatory in **HALL 6 C 681**.

www.kontron.com

Airborne self protection and tactical communication

(df) Elbit Systems has choosen Eurosatory for several launches of new technology. Among the highlights of the systems to be launched at the show are IronVision, a helmet-mounted display for armoured fighting vehicles, SupervisIR, a ground-based infrared wide area persistent surveillance system, the Primrose intelligent network of miniaturized wireless sensors, the SMART suite advanced infrastructure for end-to-end tactical C4I and of course the E-LynX family of mobile tactical communications solutions.

Of special interest will be the outstanding capabilities of Elbit in the field of airborne self protection. Here the LG²MK will be shown, that can convert existing 120 mm standard mortars into precision weapons. With this feature LG²MK supports minimum collateral damage.

On display in this area will also be mini-MUSIC, the newest member in Elbit Systems Electro-optics Elop's MUSIC family of proven DIRCM systems. Lightweight and compact, mini-MUSIC is easily installed on small and medium rotary and fixed-wing platforms.

(Photo: Elbit Systems)

Also the newly launched E-LynX family of mobile tactical communications solutions includes some highlights, like the Tadiran VIC-500IP. This is an advanced, reliable and customizable digital intercommunication system for fighting vehicles, offering 4th generation digital vehicular intercommunication meeting the most demanding operational scenarios and easily tailored to specific requirements.

For more information visit Elbit in **HALL 6 D 567**.

www.elbitsystems.com

(Photo: CST)

New heat haze reduction feature

(df) The Danish Company Copenhagen Sensor Technology (CST) will show their new cameras with a unique heat haze reduction feature during Eurosatory. The phenomenon of heat haze – also known as heat shimmer – is a common problem when you want to have a clear sight over areas where heat ascends from the surface, creating heat haze which blurs the image. To minimise heat haze disturbance in the image, CST has implemented it in their cameras, with an on/off function which gives a more stable image to easier identify an object.

This heat haze reduction has been implemented in CST solutions, like the SPECTREL mid- and long-range camera systems, which are designed for use in homeland security and Critical Infrastructure Protection (CIP) applications. The SPECTREL system comprises a highly sensitive colour CCD camera and a ruggedized zoom lens built into a protective, hermetically sealed housing, designed to withstand harsh conditions.

For more information visit CST in **HALL 6 D 198**.

www.copst.com

Local situational awareness

(df) First Sensor and KTK Kommunikationstechnik will present their 360° Local Situational Awareness System (LSAS) at Eurosatory. This system will be shown in a live demonstration on a Protected Mission Module Carrier G5 (PMMC G5) from FFG Flensburger Fahrzeugbau.

The overall technical integration was done by KTK Kommunikationstechnik. The 360° view LSAS system consists of four digital HDR-CMOS cameras in specially adapted rugged housings and a software-based video processing unit. The robust, high-performance cameras from First Sensor feature a very wide dynamic range (>100 dB) for difficult lighting conditions and withstand the harshest environmental conditions ,such as cold, heat and permanent vibrations.

The platform-independent, flexible area -view software can be easily integrated in various operating and image processing systems. The LSAS also allows the programming of arbitrary, individual viewing angles and zoom functions for the driver, commander and crew. This increases the awareness of the vehicle surroundings, improves the manoeuvring of the vehicle in difficult situations and enables a virtual window in the carrier hull.

See the solution in **HALL 6 K 652**.

www.ktk-gmbh.eu

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Defence & Security

Security sensor management

(df) Just for Eurosatory HGH Infrared Systems has introduced a new feature to accompany their advanced intrusion detection and tracking software, Cyclope, with the addition of Hypervisor. Especially designed for critical site protection, where multiple Spynel are deployed, Cyclope Hypervisor centralises all data to offer a global geolocation of all events.

Cyclope provides users with an automated experience, detecting and tracking an unlimited number of targets-on land, in air, or on sea- simultaneously from all directions. With Cyclope Hypervisor, the system would automatically connect to all Cyclope workstations to pull up relevant data for the user. Adding to this the Spynel sensors offer a 360° perspective for wide area applications. The continuously rotating head captures full panoramic, HD images which the Cyclope software then automatically analyses by detecting and tracking all targets identified. The open architecture, which has always been a mainstay within the Cyclope framework, will remain the same to allow for an easy integration with other existing platforms in place such as command and control, radar and AIS platforms.

For more information visit HGH Infrared Systems during Eurosatory in **Pavilion CCI ILE-DE-FRANCE, HALL 6 F 370**.

www.hgh-infrared.com

Gunshot detection systems

(df) At Eurosatory METRAVIB presents their acoustic gunshot detection systems, that improve protection systems for people, fixed installations and mobile platforms in hostile locations. These combat proven systems detect and precisely localise small arms and RPGs. They detect the sound waves emitted by light weapon gunshots and analyze them to triangulate the position of the shooter, accurately and within one second.

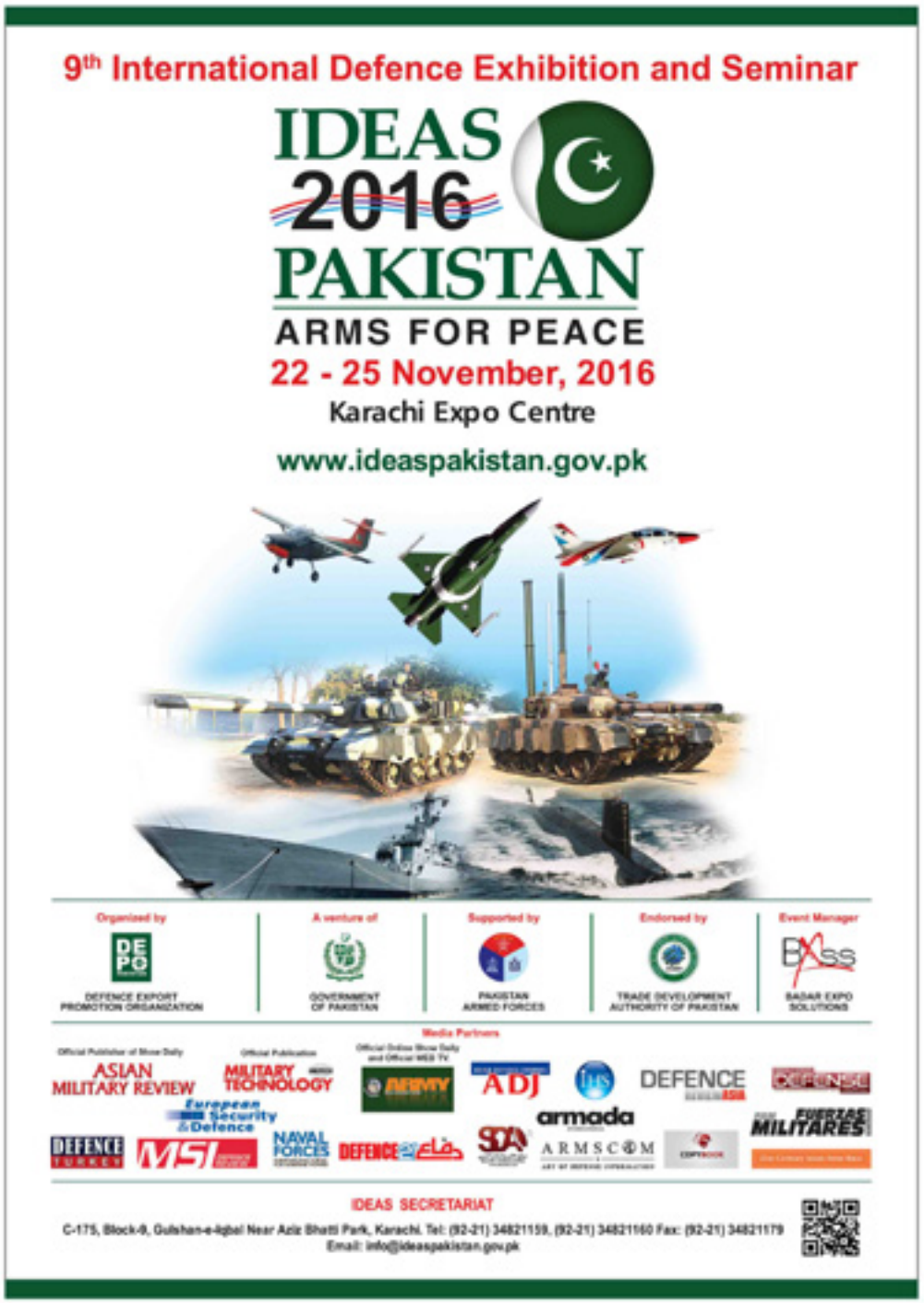
METRAVIB supplies equipment to 20 armies around the world, including those of thirteen NATO members.

Sixty new systems were delivered at the beginning of 2016 to complement the equipment already supplied to the French Army. In total, 260 PILAR systems are mounted on armoured vehicles from Renault Trucks Defense. These systems have also been chosen to equip hundreds of Griffon and Jaguar, the SCORPION program vehicles.

For more information visit METRAVIB in **HALL 6 G 733**.

www.metravib.com

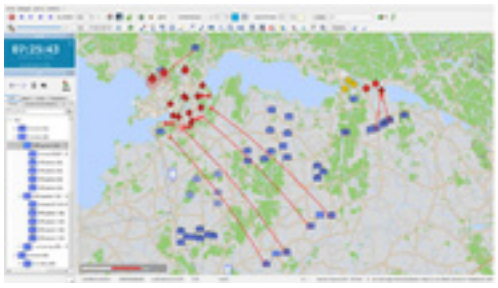
(Photo: METRAVIB)



New features for the training system SWORD

(df) MASA Group will present some new features as well as a SWORD and Direct-CGF interoperability demonstration during Eurosatory.

"The flexibility of employment and evolution of SWORD effectively allows us to foresee its use in all types of operational preparation for command posts, but also in training specialist areas," said Colonel Philippe Dutroncy, SDOR EMAT (Network Operations Development Service, Land Forces Command, French Army). Developed in close relation with armies worldwide, SWORD is a cost-efficient constructive simulation focused on user needs. SWORD immerses brigade and division command post staff in large scale conflicts, stabilization operations, terrorist threats or natural disasters, providing a broad and complete training solution.



(Graphics: MASA Group)

SWORD simulates a diverse range of situations in highly realistic environments. With this soldiers and commanders might train to lead thousands of autonomous subordinate units on the virtual field.

MASA Group is in **HALL 5 F 82**.

https://masa-group.biz

Thermal Targets for training

(ck) Reshet Graf presents its ThermaReal family of realistic thermal targets for training soldiers in the use of thermal devices. These targets simulate objects such as people, tanks, and UAVs, improving shooting accuracy in the dark on the battlefield.

Thermal vision - White hot

"We developed this family of targets in response to the needs of our customers for targets that closely simulate the battlefield – and enable them to conduct training that is as realistic as possible in order to effectively prepare fighters for battle," said Albert Ohayon, CEO of Reshet Graf.

ThermaReal targets withstand all weather conditions, have a high resistance to shooting, can be repaired with stickers, and provide hig contrast when using vision devices. These targets do not require electricity for the heating element since the raw material itself reflects heat and cold.

Reshet Graf at Eurosatory in **HALL 6 D 733**.

www.infrared-id.com

Supported By the Romanian Armed Forces

Integrated Air & Missile Defence Eastern Europe

Conference:
26th - 27th July 2016

Romanian & International Industry Partnership Day:
28th July 2016

Venue:
National Military Circle, Bucharest, Romania

The topics approached on the event were interesting by emphasising the need of integration of AD and MD domains

- Barbu Iulian, Romanian Armed Forces, Past Attendee

Engaging in Regional Collaboration & Capability Modernisation To Protect Eastern European Skies From Airborne Threats

Keynote Speakers Include:

Mr. Zoran Jolevski, Minister of *Defence of the Republic of Macedonia*

Mr. Mustafa Seker, Deputy Undersecretary for System Projects and Logistics, *Turkish SSM*

Major General Laurian Anastasof, Commander, *Romanian Air Force*

Major General Cătălin-Adrian Moraru, Chief of Armaments Department, *Romanian Ministry of Defence*

Major General Rumen Radev, Commander, *Bulgarian Air Force*

Colonel (P) Pál Szücs, Acting Chief of Staff, *Hungarian Air Force*

Colonel Davit Abramishvili, Commander, Aviation and Air Defence, *Georgian Armed Forces*

Attend Integrated Air and Missile Defence Eastern Europe in order to:

- Overcome the bespoke challenges facing air defence in Eastern Europe by working with regional leaders to **set high level operational and procurement plans** as well as looking at future policy
- Deliberate with key allies on the **regional integration strategies** being used to merge all elements of national air defence and assess the C2 systems available to improve your own capabilities
- **Analyse the threats facing Eastern European nations,** both collectively and individually, review the full range of airborne threats faced across a wide frontage and beyond the visible horizon
- Maximise your ability to **remove potential threats before they enter your airspace** in the case of unauthorised foreign aircraft or deterring access in the first place through the presence of effective GBADs, air policing and Airborne Early Warning for Air Defence
- Engage in critical discussions with the Romanian Armed Forces and other regional leaders regarding **current and future air defence acquisitions** as they push towards NATO's 2% defence spending target

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The fibre of protection

Gelvenor Textiles will show their latest fabrics during Eurosatory. The South African-based manufacturer is a preferred weaver of p-Aramid yarns which are used to produce both hard and soft water repellant ballistic protective fabrics. Gelvenor Textiles have also developed and produced an extensive range of flame retardant fabrics.

The fabrics are woven from inherently flame retardant fibres and yarns, making these NFPA and EN approved fabrics suitable for the manufacture of workwear for

(Photo: Gelvenor)

firemen, the police or members of the armed forces. In addition, Gelvenor Textiles also produce a range of fabrics for military applications. These include plain, dyed or camouflage print varieties and ballistic nylon which are used to develop uniforms, rain wear, backpacks, shelters, ponchos, sleeping bags and tents for armed forces around the world.

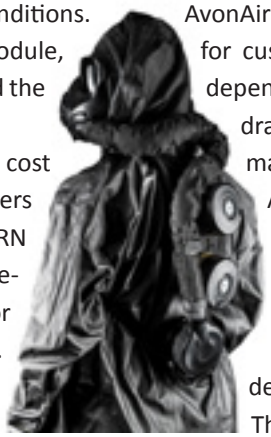
The fabric is manufactured in-house, giving them complete control over the entire production process and a distinct advantage over other textile manufacturers. Their fabrics are all independently tested at the ATS testing facility which ensures that their textiles consistently perform to international standards.

Visit Gelvenor Textiles during Eurosatory in **HALL 6 C 567**.

www.gelvenor.com

Avon Protection

(ck) Avon Protection delivers respiratory protection products to meet the changing CBRN threat environment. The new AvonAir range is the first adaptive powered air system capable of being configured to match changing operational conditions. It includes the EZAir+ power module, the FM54 mask, the MPPAPR and the CSPAPR.



The products are interoperable, cost effective, and able to protect users from a broad spectrum of CBRN situations – from small scale chemical spills or incidents at major events through to full defence. Commenting on the new product range, James Wilcox, Director of Marketing said, “After 5 years of development Avon has produced the next generation of modular CBRN respiratory protection. Our focus on providing the wearer with lighter, modular and fully integrated solutions is evident in the AvonAir range. In addition the ability for customers to configure systems depending on operational needs dramatically lowers their cost of maintenance.”

Avon’s range of handheld thermal imagers for firefighters, surveillance operatives, first responders and law enforcement officers are market leaders around the world.

The Argus P Type camera will be

(Photos: Avon Protection)

used at Eurosatory to demonstrate how the heat signatures of people and objects can be used to detect hidden devices and voids. With the ability to detect a person up to 500m away, quick start operation (5 secs) to save time and battery life, and video and stills capability as standard, the P Type has many of the features available on any thermal imaging camera.

Avon Protection is at Eurosatory in **HALL 6 G 462**.

www.avon-protection.com

New Delta OL 3.0 Suit and Delta Blizzard Suit launched at UF PRO

(df) The Swedish company UF PRO will show their very new Delta OL 3.0 Suit and the Delta Blizzard Suit in snow Camouflage at Eurosatory for the first time. Information about these two products will also only be given to visitors at the stand D287 hall 6.

Besides these novelities the new generation of the Striker XT BDU, Monsoon Jackets and the new Stealth Smocks are also going to be displayed. One of the biggest updates with this new generation of Striker XT pants is that the camouflage version has the stretch panels also in camouflage. This was until now only the case with the Striker HT pants in MultiCam, where UF PRO combined the MultiCam NyCo fabric with the Schoeller-dynamic stretch material in SloCam.

(Photo: UF PRO)

For more information visit UF PRO in **Hall 6 D287**.

www.ufpro.si

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Defence & Security

Launch of a tactical vest and helmet

(df) Marom Dolphin will launch the Raider-X1 at Eurosatory, a slim, lightweight tactical vest that facilitates the fighter's task-oriented equipment for the battlefield and in ongoing operational activities. In addition, the company's subsidiary, NVISOL, will unveil the Orion System, a complete tactical helmet kit, for the first time.

The Raider-X1 vest has an aluminium buckle that enables the fighter to open and close the vest with one hand, reduces the weight of the vest, and allows an optimal fit. The modular vest also allows hard armour to be inserted into its front, back or sides. Included in the Raider-X1 is the T-Belt, an integrated internal cummerbund system that supports the fighter's lower back and is designed to transfer weight from the shoulders down to the waist.

The Orion System kit includes a textile cover for the tactical helmet that incorporates a built-in camera – CONTOUR+2 – with an integral GPS, a NIGHTOUR IR flashlight for night vision, an external power pack, and an interface for downloading information and for charging.

The system enables video capture via the helmet's camera during the day and in complete darkness, up to a distance of 25 metres. The lightweight solution, developed for use in extreme field conditions, enables intuitive operation without the need for adjustments to the existing helmet cover.

Visitors might see these novelties during Eurosatory in **HALL 6 D 692**.

www.marom-dolphin.com

Soldier systems and connecting technology at Rheinmetall

(df) Among other technologies Rheinmetall will also present their soldier systems during Eurosatory. Two examples, the Future Soldier – Expanded System (IdZ-ES) for the Bundeswehr and Argus for the Canadian Forces will be of interest. The modular design of both systems aims to unite operational flexibility with the ability to adapt to new situations and mission requirements. In particular the seamless C2 system architectures based on international standards – from the individual rifleman up to brigade-level command posts – is the core component of both soldier modernisation programmes.

Other highlights of the presentation will include simulation technology for army, air force, naval and civilian users. One example at Eurosatory will be the Leopard Gunnery Skills Trainer, that unites simulator technology and the "Weapons and Ammunition" division of the company.

Also some more "hardware" will be presented at the booth, like their newest example of turret technology, the Lance turret and the turret structure for the new British "Scout" armoured reconnaissance vehicle.

Visit Rheinmetall in **EXT Pe6b D 211 or EXT Pe6b D 261**.

www.rheinmetall.de

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- Strategic and Comprehensive CBRN Defence – CBRN Protection, WMD/CBRN Threats
- WMD Disablement, BMD (Ballistic Missiles Defence), Cyber Defence
- Civil-Military Cooperation on CBRN Defence
- R&D, CBRN Medical Countermeasures, Force Health Protection (FHP)

- Civil-Military Cooperation in Context of WMD/CBRN Defence Protection
- WMD/CBRN Threats – Terrorism, Cyber Defence in Context of Critical Infrastructure Protection, TIC/TIM, CBRN Reach Back
- Use of Robotics, Drones, New R&D Projects

- CBRN Medical Countermeasures – Innovative Approach, Pharmaceutical Aspects, Toxicology, Radiobiology
- Field Medicine – Advanced First Aid, Resuscitation Techniques, Materiel and Pharmacy Support, Robotics
- R&D in a Force Health Support

- Future Threats, Challenges and Opportunities of Advanced Robotic Systems
- Autonomous Systems and Robotic Swarms – R&D and Future Application
- Modelling and Simulation of Intelligent Systems – AI

- National and International Views on Future Development of Logistics and Related Technologies
- Capable Logistician Series

- Cyber Threats and Trends
- Crisis Management
- Critical Information Infrastructure Protection
- Hybrid Warfare

www.future-forces-forum.org

Swedish Pavilion
HALL 6

BAE Systems Bofors presents their main products, the Bofors multi-target Naval Gun Systems of 40mm and 57mm caliber with their programmable 3P Ammunition, the 155mm Wheeled Howitzer Archer, Bofors LEMUR family of Remote Weapon Systems, and intelligent artillery ammunition.
BAE Systems Hägglunds presents their primary products being medium weight combat vehicle family, armoured all-terrain vehicle family, logistical support and services and hybrid electric drive systems for the civilian market.
www.baesystems.com

Basalt is a systems integrator delivering customized IT systems based on COTS and MOTS products. The delivery range from central, datacentre based, highly secure systems to mission adaptable systems for operations all over the world. In 2013, Basalt became a provider of Command and Control Systems to the Swedish Defence Material Administration.
www.basalt.se

Carmenta provides geospatial products and solutions as well as systems for emergency response and critical infrastructure protection. Core business is the management and visualisation of geographical information and situational awareness. The technology has high performance, ease of use, openness and scaleability. Carmenta has its head office in Sweden and subsidiaries in Germany, France and Spain.
www.carmenta.com

Combitech is one of the Nordic region's largest technology consulting firms, with more than 1,400 employees in Sweden, Norway and Finland. The company combines technical expertise with in-depth industry knowledge, all-round capability and a particular focus in Defence and Security. This results in customised, sustainable solutions for clients both in the Nordic region and internationally.
www.combitech.se

Habia Cable develops, manufactures and markets standard and custom-designed cables and harnesses for demanding applications. The customers are found in the telecommunications, nuclear power generation, defence, offshore and industrial sectors. In its segment, Habia Cable is one of Europe's biggest wire and cable manufacturers. The company has a global presence and sales in more than 50 countries worldwide.
www.habia.com

MilDef offers an extensive range of rugged computers and specialized electronics for communication in extreme environments, where reliability, robustness and high performance are crucial. The products are built to survive the rigours of combat in any environment from scorching desert heat to severe arctic winds. With limited space to pack in all the required functionality, MilDef offers customised solutions.
www.mildef.com

Recotech produces, processes and repairs components and systems for rough environments. The business area Ground Support Equipment (GSE) specialises in civilian and military applications, with the Wing Lift being a patented, cost effective Container Carrier handling concept for lifting and moving containers short distances. Examples of customer references are the NATO countries and many other armed forces, Red Cross, Red Crescent, Rescue Services, United Nations, Saab, Ericsson, Northrop Grumman and international rail, road, sea and air cargo operators.
www.recotech.com

Scania is one of the main manufacturers of trucks and buses for heavy transport applications, and of industrial and marine engines. Service related products account for a growing proportion of the company's operations, assuring Scania customers of cost-effective transport solutions and maximum uptime. Employing some 42,000 people, the company operates in about 100 countries.
www.scania.com

Systecon core business areas are consulting services and decision support software tools for systems' Life Cycle Management and Integrated Logistics Support. Systecon's software Opus Suite is used by defense authorities and industry leaders worldwide to provide decision support in systems and logistics engineering. User list includes defence forces of Australia, Brazil, Denmark, France, Italy, Sweden, Singapore, Thailand, Turkey, United Kingdom and USA, the joint armament organization OCCAR and defence suppliers Airbus, BAE Systems, Boeing, Eurocopter, Finmeccanica, Lockheed Martin, Raytheon, Saab, Samsung, Textron and Thales.
www.systecon.se

2016 EUROSATORY 13 - 17 JUNE 2016 / PARIS
Defence & Security

Israeli Pavilion
HALL 6

Ashot Ashkelon highlights their drive train, suspension and mobility solutions for battle tanks & APCs.
www.ashot.co.il

Beth-El displays some of their highly efficient ventilation and CBRN filtration units at Eurosatory.
www.beind.com

BlueBird Aero Systems will exhibit new features to the ThunderB small-sized tactical UAS, the SpyLite mini-UAS and MicroB micro-UAS.
www.bluebird-uav.com

Camero-Tech will display tactical sense-through-the-wall systems.
www.camero-tech.com

Commtact will display their advanced data link solutions and a newly developed HD capability.
www.commtact.co.il

CONTROP, outside of the Israel Pavilion, will debut two new surveillance and portable intrusion detection systems.
www.controp.com

General Robotics will launch a new Tactical Combat Robot with attack capabilities and a Light Remote Weapon Station.
www.glrobotics.com

IWI presents the military version of the X95 assault rifle in .300 AAC Blackout caliber. The company will also have on display its entire range of small arms.
www.israel-weapon.com

Lior Textile will display an assortment of their protective gear, including a brand new Body Armor for the army, police, and SWAT units, dealing with the most current threats.
www.lior-protective.com

Magam Safety will exhibit a variety of their protective, rescue and survivability equipment from rubber and textile.
www.magam-safety.com

Marom Dolphin will show a range of their textile solutions including a new protective vest and a new carrying system.
www.marom-dolphin.com

Meprolight will have on display their entire range of electro-optical systems, thermal and night vision equipment, and self-illuminated sights.
www.meprolight.com

MTC will exhibit a range of electro-mechanical products including a new Redundant Electro-Mechanical Rotary Servo Actuator (ERSA) for UAVs, which reduces UAV Flight Control Failures and enables maintenance simplicity.
www.mtcind.com

NETLINE will reveal a new Drones detection and mitigation system and a miniature airborne COMJAM system.
www.netlinetech.com

RADA displays its MHR family of Force and border protecting tactical radars, some of them with proven counter-UAS capability.
www.rada.com

RAFAEL will present a suite of solutions for land and air defense applications, including the new SPIKE SR - Man-Portable, Electro-Optic and the new Guided Missile System.
www.rafael.co.il

Reshet Graf will exhibit a range of their Infrared ID solutions for night vision, SWIR and thermal devices. The company will focus on Infrared combat ID, thermal combat ID and passive thermal targets.
www.infrared-id.com

Roboteam will display its PROBOT versatile tactical robot, MTGR micro-tactical ground robot and the IRIS individual robotic intelligence system.
www.robo-team.com

RP Optical Lab, will exhibit a multi-sensor system for border and coastal surveillance missions and critical infrastructure protection.
www.rp-optical-lab.com

SCD will present a new HD SWIR very long-range identification capability and a new miniature SWIR detector.
www.scd.co.il

Shladot will highlight a new tank trailer, that has already been tested for carrying ultra-heavy main battle tanks.
www.shladot.com

TechMer will display a range of network centric communications solutions, including a new maritime communications management system.
www.mer-group.com

Unique field bakery for 150 pita breads per hour

(df) At Eurosatory TECHNIC EXPORT shows their unique range of field bakeries. Especially the new PITA TEX 250HJ field bakery is so far unique in the world. Thanks to its special engineered oven the unit makes baking 150 pita breads per hour possible, in field conditions.

The built in diesel generator makes the unit autonomous and useful on all fields operations. The bakery is also fitted on a single axle trailer for high mobility. This field bakery does autonomously all the necessary steps in the process of pita bread baking, like kneading, weighing, automatic rounders dividing, fermentation (rising) and of course baking. The compact unit can be deployed very fast with a semi-automatic deployed protection tarpaulin around it.

(Photo: TECHNIC EXPORT)

Other presented field bakery models include the TEX 250HJ and TEX CBC 300HJ Compact Boul Cube.

Visit TECHNIC EXPORT during Eurosatory in **EXT Pe6b G 320**.

www.technicexport.com

CR300 field kitchen

SERT France will show their latest innovation at Eurosatory: the CR300 field kitchen. It has been designed to ensure fast and efficient catering for 50 to 300 people in the field. It has been fully developed in-house to provide reinforcement to the existing SERT equipment with a principal aim: the emerging markets.

This unit is equipped with two circular new generation catering modules, all in stainless steel. The layout of the catering equipment can be made with kettles of 200 litres, double walled pressure cooker of 150 litres, frying pans of 70 litres or woks of 800 mm diameter.

Its low-power generator ensures full autonomy (option). The power of the new SERT high efficiency multi liquid fuel burners ensures a fast rise to temperature. Weighing less than 900 kg this highly mobile unit can be towed by a light vehicle.

(Photo: SERT)

Visit SERT in **EXT Pe6b G 311**.

www.sert.fr

Mobile drinking water supply

(df) Together Mercedes-Benz Special Trucks and Kärcher Futuretech will be presenting their solution for improved drinking water supply in disaster areas, the "Drinking water Unimog", a water purification system that can be transported to difficult-to-access regions.

The so called "Water Unimog" enables the transport of up to three autonomous drinking water supply systems to different locations over difficult-to-access terrain. A hydraulically operated crane helps save time when unloading the systems on-site.

As soon as the Water Unimog is unloaded, the loading platform is prepared for use distributing the drinking water to the surrounding regions. A pillow tank with a capacity of 5,000 litres is placed on the platform and filled using a high-capacity pump integrated on the Unimog.

The core system is the WTC 5000 UF water treatment system from Kärcher Futuretech. It is operated by the integrated power generator and can produce up to 5,000 litres of drinking water per hour. It produces particle-free drinking water from almost any natural source of raw water. This water is classified as both microbially and virally safe, and complies with the German Ordinance on Drinking Water. The daily output of three WTC 5000 UFs working together is 360,000 litres per day.

More information at Kärcher Futuretech HALL 6 G 630.

www.karcher-futuretech.com

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ULTRA LIGHT container Space Module

(ck) CRM-Eurolight container space modules of NARR Modular Systems GmbH are used to build mobile facilities in disaster and crisis regions, i.e. field hospitals.

The container space modules are delivered as a very light and robust modular system in standard 20 foot containers. The special packaging system allows minimal transport volume and maximum transport security.

With its patented locking technique, NARR gives a full guarantee of at least 30 times assembling and dismantling. The room modules are complete with electrical infrastructure and air-conditioning and meet the requirements regarding static, impermeability to dirt and moisture, hygiene, splinter protection and fire safety, thermal and acoustic insulation and fire protection.

At Eurosatory NARR Modular Systems presents its new CRM ULTRALIGHT room concept with elements whose weight can be lowered again. This simplifies assembly and reduces transport weight.

The traditional features of the high-quality components such as long life, low maintenance, energy and environmental performance remain unchanged.

(Photo: NARR)

Vitis NARR Modular Systems at Eurosatory at **EXT Pe6b C 250**.

www.narr-crm.de

Command post systems and military camp solutions

(ck) At Eurosatory Drehtainer places special attention on all sorts of command posts: on the mobile command system of the German Air Force, on the control and fire control centre for the MANTIS range protection system, on the Ground Support Container System (GSCS) for the Eurofighter project and on various electronic warfare facilities.

In addition to ballistic and blast protection the RF shielding plays a crucial role for these facilities. Integrating various technical systems places high demands on the design.

Drehtainer demonstrates its extensive experience in this sensitive area by cooperating with leading systems integrators. Besides command post systems, Drehtainer also presents different and partially-reinforced military camp solutions for housing soldiers and for the protection of facilities.

Over the last decades Drehtainer has been focusing its business activities on the development and manufacture of special containers and special vehicles technology, including the protection of military facilities and, the implementation of industrial and nuclear-technology standards.

(Photo: Drehtainer)

Drehtainer will be at Eurosatory in **HALL 6 L 695**.

www.Drehtainer.de

Combined climate and power generator

(ck) Just in time for Eurosatory Fischer Panda has put its latest product on the market - the combined climate and power generator Panda 45i CANTOR.

The new Panda 45i CANTOR can be used both for the power supply and the air conditioning of tents and mobile shelters. Its 36 kW generator features the highly efficient and environmentally friendly variable speed technology (VSCF). Compared with a traditional fixed-speed generator, this means that exhaust emissions and fuel consumption can be reduced by up to 20%.

Facilities are heated or cooled by two 10 kW water-cooled compressors powered directly by the generator. The compressors can also be powered by the engine. The cooling capacity of 4 to 20 kW can be controlled continuously.

The air conditioning unit can provide cooled air at up to 6,000 m³/h.

In addition to air conditioning, the CANTOR is a highly efficient heating device with a heat recovery of up to 35 kW. The heater requires no additional fuel.

The electric heating for hot water is 10 kW.

Visit Fischer Panda at **EXT Pe6b G 181**.

www.fischerpanda.de

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Noptel laser rangefinder

(df) At Eurosatory Noptel will show their new modules for the long distance laser rangefinder family. The interesting part of Noptel laser rangefinder technologies are the middle range and long range laser rangefinders. These small size, light weight modules are provided for system integrators and manufacturers globally. The rangefinders exploit laser pulse flight time measurement technology, special cumulative measurement methods and advanced signal processing techniques. By using this cumulative measurement method Noptel can exploit standard diode lasers and eye safe technology, yet reach out to several kilometres with good measuring reliability.

(Photo: Noptel)

Visit Noptel in **HALL 6 F 197**.
www.noptel.fi

Leidos presenting their wide range of military solutions

(df) At Eurosatory Leidos will present their solutions in the three fields: open systems for C2ISR, logistics and cyber. Especially the C2ISR solutions will be of interest, with the C2 solution adapting capabilities to warfighter needs fast and with less-specialized software meaning lower initial cost.

Also Leidos has supported successful research, development, and deployment of GPSdenied navigation capabilities for government and commercial customers for more than 20 years. Also interesting is the Positive Train Location (PTL), that provides real-time, sub-meter tracking information through a broad range of operational environments, including those without Global Navigation Satellite (GNS) services.

Find Leidos at Eurosatory in **HALL 5 D 567**.
www.leidos.com

TEMIS with up to three sensors

(df) MERIO presents their new range of micro-gyrostabilised gimbals weighting less than 750 g named TEMIS during Eurosatory. TEMIS gimbals are a concentrate of high technologies integrating up to three sensors: visible sensors HD (EO), infrared sensors (IR) and/or laser.

These gyrostabilised payloads are adaptable to all types of ground, maritime or aerial (fixed and rotating-buckles drones as well as aircraft) carriers. The configuration of the sensors is entirely customisable. The small size and weight makes it especially suitable for UAV-use and therefore representing the core capabilities of the company, since MERIO is specialised in payload systems for drones and aircraft. Their micro-gyrostabilised gimbal ranges have been designed for the industrial sector (sensitive sites surveillance, hard to access aerial shooting) and for military purposes (observation and reconnaissance of theatre of operations).

More information at the MERIO booth in **HALL 6 GF 767**.
www.merio.fr

Automated speech translating solution

(df) Automatic translation has been a dream to many military commanders since the first vision of this kind in the famous Star Trek series. At Eurosatory the companies SYSTRAN and VOCAPIA will demonstrate how they combined their language processing technologies to provide intelligence professionals with an automated speech translation solution available in more than 45 languages.

Current international geopolitical instability has enhanced the need for understanding the Eastern and Middle-Eastern languages. Actors in charge of territories security more than ever need to have efficient multilingual intelligence capabilities of OSINT and COMINT.

Therefore, SYSTRAN and VOCAPIA have decided to combine their technologies and offer a speech transcription and machine translation solution in more than 45 languages. With this solution, it's now possible to transcribe an audio file in Arabic and instantly translate the automatic transcript to English. Other languages might follow if there are customer needs. With this feature the cost intensive teaching of minor languages to experts might become obsolet, since most work could be done by just English speaking people.

A demo will allow visitors to see how the combination of both companies' expertise can process a large number of audio files to quickly detect critical information and understand it regardless of language. To improve translation quality, SYSTRAN uses custom-tailored models that have fulfilled the quality standards of many Intelligence agencies in Europe, the U.S., Asia and the Middle East.

Visit the solution in **HALL 5 booth 5D 448**.
www.systransoft.com
www.vocapia.com

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Electro-mechanical rotary servo actuator for UAV

(df) MTC Industries and Research Carmiel Ltd. launches its redundant Electro-Mechanical Rotary Servo Actuator (ERSA) for UAVs during Eurosatory. This almost fail-safe system significantly enhances UAV survivability and enables extended time in the air.

ERSA was designed with a built-in fail-safe based on its duplicate flight controls located on its two separate control boards. The back-up control allows the UAV to continue flying in the case of component failure. ERSA's dual DC brushless motors also require much less maintenance due to the absence of wear-and-tear prone brushes. Additional features include a potentiometer and high-efficiency gearbox, as well as optional digital or analogue outputs. Apart from ERSA MTC will also present a wide range of additional solutions, including gyros and MEMS, electric motors, position sensors, solenoid valves, slip rings, canard fin control actuation systems, fuel control manifolds, and gimbal units, like the ERSA-0311. This is optimised for UAV requirements, such as temperature range from -40°C to 71°C, EMI RFI shielding and high reliability.

MTC will be at Eurosatory in **HALL 6 E 651**.

www.mtcind.com

New Peli Air Cases and Rack Mount Cases

(ck) Peli Products, US-based manufacturer of tough cases, will present its latest innovations - Peli Air cases and Peli Hardigg Rack Mount cases - at Eurosatory. The Peli Air cases are the lightest cases in the market and are up to 40% lighter than its predecessors, making it the lightest cases in the market today.

They provide the high standard of durability and toughness that is required by the military. The Air cases are available in six long-form, travel-ready sizes and are constructed of lightweight HPX2 resin, a new generation of Peli's proprietary formula that rebounds to stress without breaking. The Peli Hardigg Rack Mount cases include features of Peli's configurable rack cases in a pre-configured solution for quick plug and play use.

Rack equipment is becoming lighter in weight which requires an economical and rapid method of attachment. Peli Hardigg cases are built utilizing a full-boxed steel-rack with an industry-standard square hole pattern to allow hanging electronics. These cases also include clip nuts – just attach the clip nut onto a square hole to get a secure threaded, mount.

Peli at Eurosatory in **HALL 5 H 790**.

www.peli.com

(Photo: Peli Products)

Small size, wide variety

(ck) ODU, a company specializing in electrical connection technology, is presenting a new hybrid connector in a mini plastic housing during Eurosatory.

The ODU MAC ZERO is a compact and flexible connector. It combines various transmission types in a small space. The space-saving housing geometry enables a wide range of modules for reliable transmission of signals, power, light waves, data or coax. Overall, customers can freely choose and combine up to nine units. Instead of an aluminum frame, the ODU-MAC ZERO housing has built-in rails and therefore contains no magnetic components.

(Photo: ODU)

The frameless construction offers three different cable outlets and has an aesthetic, ergonomic design. Low insertion and withdrawal forces and coding possibilities by module or colored bend protection facilitate handling.

The SNAP-IN interlock with tear-off guarantee allows for rapid disconnection in an emergency. "With the ODU-MAC ZERO we offer our customers a safe, individual connection solution with high packing density and functionality," emphasizes Bernhard Säckl, Portfolio Manager at ODU.

ODU at Eurosatory in **HALL 6 GF 546**.

www.odu.de

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ESD Spotlight

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ESD SPOTLIGHT

European Security & Defence

New military cyber command

Dorothee Frank

Germany has become the first nation to establish a military branch exclusively for cyber space. This branch – called KdoCIR – will start with 13,700 personnel in April 2017. At that time the command staff will comprise 230 people, with a Chief of Staff in the rank of Vice Admiral or Lieutenant General, and therefore of equal prominence with the air force, army and navy. At least in the German Bundeswehr.

In the initial cader the KdoCIR will unite capabilities connected with cyber, that were quite widespread throughout the Bundeswehr. A main part will move from the Joint Support Service to the Cyber Command, mainly the Command Support Command with six Command Support Battalions, the First NATO Signal Battalion, the Command Support School and the IT System Centre.

From the Joint Support Service the Strategic Reconnaissance Command will also move to the Cyber Command with its Electronic Warfare Evaluation Centre, four Electronic Warfare Battalions, the Signals Intelligence Technical Analysis Centre, the Strategic Reconnaissance School, the Imagery Reconnaissance Centre and the Geo Information Centre.

Other elements being integrated into KdoCIR will come from the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support (BAAINBw) and from the other military branches. The KdoCIR aims to unite the knowledge inside the Bundeswehr concerning communication and information technology, starting with handhelds, communication lines and computers and ending with secure networks, satellite reconnaissance and electronic warfare. The 13,700 posts are the result of adding all these elements together; the promised increase in importance will only be achieved by increasing the number of personnel.

Another new and key point of the KdoCIR is that they are allowed to procure on their own. Germany has quite a complicated procurement process, with the military branches not being responsible for or able to influence procurement. Instead, first the planning department of the MoD and then the BAAINBw are responsible for all procurement, no matter whether ship, tank or plane. This is about to change, with the KdoCIR being responsible for their own equipment, including planning, procurement and maintenance.

The German MoD – and of course the soldiers – hope to shorten the time from first identifying a capability gap till the procurement of solutions to under a year. At the moment this process takes two or more years onaverage and therefore does not fit the rapid pace of technology evolutions in electronics.

So quite some hopes are connected with the KdoCIR: quicker procurement, more professionalisation, more personnel and better reaction

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