

Forces, Footprint, Agreements and Partnerships

General Tod D. Wolters, Commander U.S. Air Forces in Europe – Air Forces Africa (USAFE-AFAFRICA), was interviewed by ESD reporter Joetey Attariwala. This is an excerpt, please read the full interview in ESD 3/2018.

ESD: Could you please speak to the new defence strategy of the United States?

Wolters: Sure. To meet the national security concerns, the NDS (National Defense Strategy) directs three specific lines of effort. The first, build a more lethal force. The second, strengthen alliances and attract new partners. The third, reform the department for greater performance and affordability. Its clear intent is to develop a more lethal, resilient and rapidly innovating joint force which combined with the robust constellation of allies and partners will safeguard international order.

In perfect alignment with the NDS is our recently published USAFE-AFAFRICA Command Strategy which helps shape our efforts on the preservation and improvement of military readiness and our critical war-fighting posture. Our strategy centres on advancing the core elements – our forces, our footprint, our agreements and our partnerships.

First and foremost are our forces: the airmen, equipment, units, and organisations assigned or rotationally deployed to USAFE/AFAFRICA that we can bring to bear to address security challenges across all domains and levels of conflict. Second, our footprint: the vital network of installations, infrastructure, prepositioned equipment, and combat support capabilities required to project air power throughout Europe and Africa. And lastly, our agreements and partnerships. Everything the Command does to posture and operate in and beyond Europe and Africa is formed on the foundation of our agreements and partnerships. We greatly value these relationships and work hard and seek to develop them further.

ESD: Please share some of the recent developments and deployments for USAFE.

Wolters: USAFE's day-to-day mission is to deliver air power capabilities to meet the

requirements of geographic combatant commanders and the NATO Alliance. One of these critical air power missions is securing

the sovereign skies of our NATO allies in the Baltics. This past January airmen from the 48th Fighter Wing at RAF Lakenheath concluded the United States' fifth rotation of Baltic Air Policing. During this four-month deployment, four USAFE F-15Cs completed roughly 3,000 alert hours, over 170 sorties, and 300 flying hours performing this NATO mission. The jets were scrambled almost



Preview ESD 3/2018 · April 2018

- Interview with Admiral James G. Foggo III, Commander of the US Naval Forces Europe-Africa
- Interview with General Tod D. Wolters, Commander U.S. Air Forces in Europe – Air Forces Africa (USAFE-AFAFRICA)
- Security Developments in the Wider Black Sea Region
- Black Sea Region: Turkish Interests and

Strategies

- New Danish Defence Agreement
- Modernisation and Protection of Armoured Vehicles
- Army Helicopter Requirements
- The Technology Revolution that Drives the Drone Evolution
- Sharp Teeth for Attack Helicopters
- Defence Reform in Ukraine

Order your free copy here:

info@mittler-report.de

60 times in response to unusual or questionable air activity. Our support for the NATO Air Policing mission is just one of the many ways USAFE employs rotational forces to support our allies.

Earlier this year four B-52 STRATOFORTRESS aircraft from Minot Air Force Base, North Dakota, supported theatre integration and conducted joint and allied training to improve bomber interoperability.

Also in January, 12 F-16s from the Ohio Air National Guard deployed to Estonia as part of the theatre security package deployments in support of Operation Atlantic Resolve.

Additionally, rotations of C-130 aircraft from Dobbins Air Force Reserve Base, Georgia, and from the Illinois Air National Guard deployed to Portugal in support of Exercise Real Thaw 2018, and to Poland for joint readiness training. These rotational deployments create responsive air power capabilities and interoperability while strengthening relationships with our allies and partners.

Also, in accordance with the longstanding bilateral agreements, USAFE – under US European Command – participated with the Israeli Defense Forces in a combined missile defence exercise, Juniper Cobra '18. Activities and preparations associated with this exercise began in late January. Juniper Cobra '18 is part of a routine training cycle designed to improve the interoperability of U.S. and Israeli Defense Forces, and it represents another step in the strategic relationship between the US and Israel, and contributes greatly to regional stability.

Another recent exercise is Iniochos '18, a Hellenic Air Force led multinational flying exercise. Fourteen F-15Es and about 300 support personnel from the 48th Fighter Wing were in Greece to strengthen our relationship and maintain joint readiness and interoperability with our allies and partners.

ESD: How are you preparing USAFE-AFAFRICA forces for the increasing prevalence of anti-access / area denial environments?



(Photos: U.S. DoD)

Wolters: Our biggest concern is certainly the capability of our forces. When folks want to talk about the A2AD environment, I am quick to steer them in a discussion about gaining access to what is typically referred to as a higher threat environment. What we do to counter that is exercise and train against those specific threats, and ensure that we have a competitive edge against those threats, and that's what we will continue to do. The more ready we are, the better the capability we will have, and the better edge that we will maintain. And that will remain our focus in USAFE/AFAFRICA.

ESD: Can you please speak to NATO spending and how that relates to your command?

Wolters: Europe and Canada have increased defence spending over the past three years, and as we sit right now in 2018, eight countries will meet the two percent with 15 nations on pace to reach or exceed two percent by 2024. We are very focused on ensuring that from a bang-for-the-buck perspective, we look at cost, capability and capacity. And given those facts at this very moment, we feel that the trajectory of spending is improving, and I am firmly convinced that given this trajectory we are on the right glide path for future success.

ESD: What is your assessment of the stability situation in Turkey as it pertains to USAFE-AFAFRICA operations and the bases you use there?

Wolters: We are fielding of the same number of bases that we've had over time,

and the relationship that is ongoing from a military-to-military perspective, and certainly in the air domain with us and Turkey remains very, very strong. A strong NATO partner, our aviation relationship is incredibly powerful, and I would characterise at the end of the day all the activities that are ongoing in the air domain between us and Turkey to remain incredibly strong.

ESD: Do you anticipate increasing your presence in eastern European countries like Romania?

Wolters: USAFE's support of Baltic Air Policing and the employment of theatre security packages are a direct application of the Air Force's portion of European Deterrence Initiative funding which is projected to reach more than \$1 billion in 2018. Along with these missions, the 2018 EDI budget continues to support the prepositioning of Air Force equipment and airfield infrastructure improvements in at least six different countries.

I will tell you that our rotational presence with our U.S. Air Force assets will continue to increase in Romania as they have over the course of the last several years, and I anticipate more exchanges with our rotational forces there over time.

ESD: Do you have any closing thoughts?

Wolters: Let me say America's airmen in Europe and Africa are resourced and trained to fight as a part of our larger military team. Our unrelenting focus is on maintaining and improving our readiness to perform the critical national security missions we have been assigned.

Europe's Future Combat Air System

(df) At ILA Airbus Defence and Space Chief Executive Officer (CEO) Dirk Hoke, and Eric Trappier, Chairman and CEO of Dassault Aviation, signed a partnership agreement to join forces for the development and production of Europe's Future Combat Air System (FCAS). This FCAS might complement and eventually replace current generation of Eurofighter and Rafale fighter aircraft between 2035 and 2040.

Overall, FCAS defines a system of systems combining a wide range of elements connected and operating together, including a next generation fighter aircraft together with Medium-Altitude Long-Endurance Unmanned Aerial Vehicles (UAVs), the existing fleet of aircraft (which will still operate beyond 2040), future cruise missiles and drones flying in swarms. The overall system will be interoperable and connected in a larger perimeter with mission aircraft, sa-

tellites, NATO systems and land and naval combat systems.

"We are convinced that by deploying our joint expertise, Dassault Aviation and Airbus can best meet the operational requirements of the Forces in the development of this critically important European programme," said Trappier. "Our joint roadmap will include proposals to develop demonstrators for the FCAS programme as of 2025. I am convinced that European sovereignty and strategic autonomy can and will only be ensured through independent European solutions. The vision that France and Germany have set forth with FCAS is a bold one and it's an important signal in, and for, Europe. The FCAS programme will strengthen the political and military ties between Europe's core nations and it will reinvigorate its aerospace industry."

Both companies also agreed on the importance of efficient industrial governance in military programmes. This includes the in-



volvement of other key European defence industrial players and nations based on government funding and on the principle of best contribution.

Hoke said: "The schedule is tight, so we need to start working together immediately by defining a joint roadmap on how best to meet the requirements and timelines to be set by the two nations. It is therefore of key importance that France and Germany launch an initial joint study this year to address this task."

www.airbus.com

www.dassault-aviation.fr

DEFENCE & SECURITY INTERNATIONAL EXHIBITION

2018
EUROSATORY
11 - 15 JUNE 2018 / PARIS

**THE
LAND & AIRLAND
REFERENCE**

Identify your company as a key player

ISTAR for the European MALE RPAS Programme

(df) Elettronica, Hensoldt, Indra and Thales join forces to provide the MALE (Medium Altitude, Long Endurance) drone programme of France, Germany, Italy and Spain – designated European MALE RPAS (Remotely Piloted Aircraft System) – with an ISTAR (Intelligence, Surveillance, Target Acquisition and Reconnaissance) function. The four companies signed a memorandum of agreement, in compliance with legal and regulatory requirements, confirming their common goal to offer a coherent ISTAR functional chain for the MALE RPAS comprising all elements from sensors and computing through data processing and communications. The team is open to cooperation with other companies. “Thales, Hensoldt, Elettronica and Indra have big ambitions based on a shared vi-



(Photo: French MoD)

sion of the digital transformation of their industries and customers,” said Patrice Caine, Chairman and CEO at Thales. “Thales will be using its expertise in Defence Mission Systems mastering four key digital technologies of Connectivity, Big Data, AI, and Cybersecurity.” Ignacio Mataix, Executive Director at Indra, added: “We are building industrial cooperation in Europe and preparing for a future in which Defence investments will be mainly performed at European level. This alliance will pave the way for future large

programmes currently being defined in Europe.”

The European MALE RPAS programme is managed by OCCAR. A Definition Study contract was signed on August 26, 2016 with the European aircraft manufacturers Airbus Defence and Space, Dassault and Leonardo. The development phase is expected to be launched in 2019.

www.elettronicagroup.com

www.hensoldt.net

www.indracompany.com

www.thalesgroup.com

Boeing Teams for Germany's Future Heavy Transport Helicopter

(df) At ILA in Berlin Boeing and ten German aerospace companies agreed to cooperate on a number of business opportunities around the H-47 Chinook. The H-47 Chinook is a contender in the competition for Germany's Future Heavy Transport Helicopter. In its home country, the Chinook is expected to serve the U.S. Army until the 2060s. The Netherlands, Italy, Greece, Spain, Turkey, Great Britain and Canada have also opted for the Chinook and Germany could benefit from this broad user base.

Should Germany choose the H-47 Chinook as its new heavy transport helicopter, AE-RO-Bildungs GmbH, Aircraft Philipp, CAE Elektronik GmbH, COTESA, Diehl Defence, Honeywell, Liebherr-Aerospace, Reiser



(Photos ILA: Waldemar Geiger)

Simulation and Training GmbH, Rockwell Collins and Rolls-Royce will work with Boeing on delivery, maintenance and training under today's agreement. “Other German companies will join the industry team and work with Boeing on the integration of communication and mission systems,” Boeing announced. “This agreement will provide the German government with long-term support and training solutions on the ground. The partnership also includes maintenance, technical and flight

personnel training, research, development and technology, and supply chain optimisation.”

“With these partnerships, Boeing offers German industry the opportunity to join Boeing's supplier network in Germany or to further expand its existing cooperation with Boeing,” said Michael Haidinger, President Boeing Germany. Michael Hostetter, Director Vertical Lift Programs Germany, added: “We have put together a strong team for our Chinook offer to Germany. The Chinook is a modern, proven and operational heavy transport helicopter with high availability and low maintenance. Boeing and its German team are ideally positioned to meet the requirements of the German government, the Bundeswehr and future crews and maintenance teams.”

www.boeing.com

German SDAR for the Chinook

(df) Boeing and Rohde & Schwarz signed an agreement to integrate Rohde & Schwarz's next-generation software-defined airborne radio (SDAR) into the flight systems of

H-47 Chinook helicopters. “This is another example of how we can accommodate unique customer requirements,” said Michael Hostetter, Director, Boeing Vertical Lift Programs Germany. “Customers will

enjoy tailorable encryption, frequency hopping, agility, and excellent voice and data connectivity.”

www.boeing.com

www.rohde-schwarz.com

Germany's future Tactical Air Defence System (TLVS)

(df) The (most likely) future Tactical Air Defence System (TLVS) of the Bundeswehr is at the heart of the ILA Plaza. MBDA and Lockheed Martin jointly show the new air defence system, which is suitable for defending tactical-ballistic short- and medium-range missiles, combat aircraft, helicopters, drones and cruise missiles, together with industrial partners at the TLVS joint stand. The focus is on the flexible configurability of the system.

A new air defense system architecture was developed to effectively defend against a wide range of threats. This allows the system to network additional sensors and launchers, depending on their position. This enables seamless cooperation with EU and NATO partners and a flexible response to different threat situations. The

open system architecture also enables an extension of capabilities in the area of near and near range protection (NNbS) and ballistic missile defense. TLVS becomes the first air defence system to take full

advantage of the new PAC-3 MSE missile. Apart from the long range solution one component of TLVS is the new surface-to-air guided missile IRIS-T SL (Surface Launched), an upgraded version of the IRIS-T air-to-air missile, produced by Diehl Defence. Compared with IRIS-T, IRIS-T SL has an enhanced rocket motor, an aerodynamic hood for extended range, a data link as well as an autonomous GPS/INS navigation system. The missile's vertical launch enables comprehensive 360° protection against aircraft, helicopters, drones and



missiles. Thus, the target spectrum is the same as that of IRIS-T. The guided missile IRIS-T SL is designed for easy integration into existing and future air defence systems. This is accomplished by seamless connection to fire control systems via standardised and software-based interfaces. The launch canister intended for missile launch is simultaneously used for missile storage and transport.

www.diehl-defence.com

www.lockheedmartin.com

www.mbda-systems.com

Navigation Support of Autonomously Flying Drones

(gwh) At the ILA Berlin, the Fraunhofer FHR presented two radar sensors to support the navigation of drones. The sensors act as detectors of obstacles to avoid collisions. Radar sensors work reliably in very limited visibility, for example due to fog or dust particles in the air, and are also suitable as altimeters if other sensors such as barometers or GPS do not provide sufficiently reliable information.

The two compact radar sensors for use on drones are a monostatic radar at 80 GHz

for simple applications at short distances (up to 80 meters) and a bistatic radar at 94 GHz for considerably longer distances. The systems are easily brought into service or integrated into existing drones, whereby a cost-effective, universally available micro-PC (e.g. Raspberry Pi) controls the radar. The radar data is currently transmitted via a separate radio channel. An interface to transmit the radar data with telemetry via the flight controller is under development. In order to mount the system as easily as possible on the drone, the researchers rely on universally usable mounting opti-



(Photo: Fraunhofer)

ons. Optionally, the detection range of the radar sensor can be enlarged by swivelling movements (e.g. by using compatible gimbals), so that the environment can be monitored in flight over large angular ranges.

www.fhr.fraunhofer.de

H145 Simulator

(gwh) Reiser Simulation and Training GmbH presents the Full Flight Simulator (FFS) for the H145, one of the most modern operational helicopters, at the ILA. The simulator has been certified by EASA as a Level D training device since the beginning of 2018 and is used in the ADAC HEMS Academy for the training of pilots and crew.

The simulator has a true to original version of the H145 cockpit including the simula-



(Photo: Reiser)

ted Helionix avionics system from Airbus. In the flight simulator all flight scenarios

of the H145 can be simulated and trained, including night operations with night vision goggles.

The sight system was developed by project:syntropy together with domeprojection.com using high-resolution two-channel IR projectors FS35 from Barco. In the generated 240x80 degree field of view, the crew can also train realistically with night vision goggles (NVG).

www.reiser-st.com

Electronic and Cyber Warfare Solutions

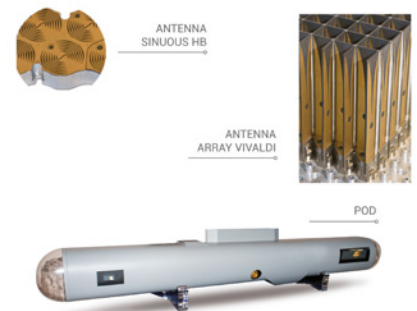
(gwh) At the ILA, ELETTRONICA and its subsidiary ELT (Meckenheim) presented the Escort Jamming solution EDGE and the new DIRCM generation ELT/600 from the product range Cyberabwehr, Electronic Warfare & Intelligence.

EDGE is the latest Escort Jamming Pod solution from Elettronica. It is a fully integrated system that can intercept and automatically process radar signals and effectively block multiple radar threats with High Power Radar (ERP) transmitters. The main task of the Escort Jammer is to carry out a comprehensive early warning and counter-

measure cycle against enemy threats that attack the attacking troops and the accompanying flight formation and increase your own mission success.

EJ devices use the latest technology (DRFM, digital receiver, solid-state X/TX modules) and phased array antennas with electronic beam guidance.

The DIRCM family ELT/160 serves for self-protection of flying platforms against threats, especially with MANPADS (Man Portable Air Defense Systems). The quantum cascade laser technology used is the latest technology that improves performance, effectiveness, reliability and efficiency in combating this type of threat.



(Graphic ELETTRONICA)

The system uses a small, high-speed rotating tower driven by sophisticated algorithms to focus the laser fire precisely on the sensors of the incoming missiles, ensuring effective protection of the platform even with multiple simultaneous threats.

www.elettronica.de

Invisible Passive Radar

(ck) At the International Aerospace Exhibition (ILA) in Berlin HENSOLDT, a German sensor manufacturer, presented its passive

radar system TwInvis. It can be integrated into an all-terrain vehicle or a van, does not emit its own signals to monitor air traffic, but passively analyses the echoes of signals from radio or TV stations. In doing so, the highly sensitive digital receivers of a single TwInvis system allow to monitor up to 200 aircraft in 3D within a radius of 250 kilometres.

Working as mere receivers, passive radar systems detect aircraft by analysing the signals that they reflect from existing third-party emissions. TwInvis delivers a precise picture of the airspace covered by simul-

taneously analysing a large number of frequency bands. In civil applications, passive radar systems make cost-effective air traffic control possible without any additional emissions and without using transmission frequencies, which are in short supply. In military applications, the system enables wide-area surveillance using networked receivers, while offering the advantage that passive radar systems cannot be located by the enemy. Two TwInvis demonstrators have been delivered to potential customers in Europe.

www.hensoldt.net

MASTHEAD

ESD Spotlight

Email newsletter of the magazine
"European Security & Defence" (ESD)

Editor-in-Chief: Dr. Peter Bossdorf

Managing Editor: Dorothee Frank (df)

Editors: Stephen Barnard (sb), Gerhard Heiming (gwh), Christian Kanig (ck)

Layout: Dorothee Frank



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

Mittler Report Verlag GmbH
Baunscheidtstrasse 11
53113 Bonn, Germany
Phone: +49 228 350087-0
Telefax: +49 228 350087-1
Email: esd.spotlight@mittler-report.de
www.euro-sd.com

Managing Directors: Peter Tamm,
Dr. Peter Bossdorf and Thomas Bantle
The company is located in Bonn
District Court of Bonn – HRB 18658
Identification number DE 811 223 089

To subscribe or unsubscribe please send an
email to: esd.spotlight@mittler-report.de

Next Generation Airborne Radio

(gwh) Rohde & Schwarz is expanding its successful R&S M3AR airborne radio family with the R&S SDAR as a high-end radio.

The high data rate, IP-based radio offers its users information superiority in networked operations management. Together with innovative waveforms, it enables broadband, simultaneous voice and data transmission.

The open system architecture of the R&S SDAR, based on the interna-



tional SCA standard, means complete independence for the sovereign customer. It benefits from the possibility of independently developing, adapting and porting waveforms including encryption.

The military airborne radios from Rohde & Schwarz meet not only military but also civil avionics standards. Thus, the R&S SDAR offers platform manufacturers a significant advantage in the civil certification capability of the aircraft.

www.rohde-schwarz.com

Future Artillery

Join 15 Heads of Artillery at the annual Future Artillery Conference. 2018 has confirmed attendees, such as Brigadier General Stephen J. Maranian, Commandant, Field Artillery, Fires Center of Excellence, U.S. Army; Brigadier Paul Tennant, Chief Joint Fires and Influence, HQ ARRC NATO; and Brigadier General Michel Delion, Commandant, School of Artillery, French Army

May 14 - 16, London, UK



Future Armoured Vehicles Central and Eastern Europe Conference

Central and Eastern Europe's Most Focused Armoured Vehicles Meeting. Hear detailed updates from key Central and Eastern European nations on their respective procurement and modernisation programmes, including briefings from heads of land, of procurement, and operational command from Poland, the Czech Republic, Croatia, Austria, Slovakia, and many others!

May 21 - 22, Prague, Czech Republic



Undersea Defence Technology 2018

Undersea Defence Technology (UDT) strives towards and continues to deliver a platform for the subsea community to gather and discuss the industry's most pressing questions, prominent technologies and innovative solutions. UDT will see international companies encompassing prime contractors, systems integrators, service providers and small & medium enterprises meet and network with over 1,400 industry influencers, government decision makers and senior military officials.

June 26 - 28, Glasgow, UK



SEDEC

It is aimed to bring together both national and international need authorities and buyers from both the state and the private sector having latest technology in border security, homeland security, secure city sectors. In addition, medium and small businesses in the defense industry supply chain will have the opportunity to demonstrate their products and capabilities to manufacturers of defense main industry platforms.

July 3 - 5, Ankara, Turkey



NCT Europe 2018

The three-day event will feature live CBRNe capability demonstrations, one conference stream, multiple workshops, training sessions for civil and military responders, a large indoor and outdoor industry exhibition and the famous NCT BBQ Party. The official partnership with the Dutch Ministry of Defence guarantees the presence of the most high-level CBRNe stakeholders from all over Europe.

July 3 - 5, Vught, The Netherlands



Future Forces Forum

International exhibition and expert events on the latest trends and technologies in defence and security. All events are focused on presentation of needs of armed and security forces, state-of-the-art technologies, R&D programmes, and business opportunities, with interactions between all participants due to the interconnected topics. Government, international organisations, industry, R&D institutions meet at one place. NATO and the European Defence Agency are involved in shaping the programme.

October 17 - 19, Prague, Czech Republic

