

DATA FUSION FOCUS MORNING: 13 NOVEMBER 2018

FUSE IT OR LOSE IT: EXPLOITING DATA IN THE CONTESTED BATTLESPACE

Information will be a critical enabler for the future fight. If combat air systems are to deliver information dominance for operations in an increasingly contested battlespace, they must first refine the ways in which they gather, fuse, exploit and disseminate data. This opening set of sessions will seek to enhance the management of information in the air domain, and will assess the potential for future combat aircraft to leverage data as a means to enhance C4ISR for the joint force.

Topics of discussion in this section will include:

- Exploiting the information capabilities of advanced combat air systems to improve C2 and deliver an independent ISR capability
- Fusing and sharing data between multiple air platforms and across domains. Combat airpower's contribution to the future joint force
- Fielding the threat from offensive IW and cyber.

0800 REGISTRATION AND COFFEE

0910 OPENING KEYNOTE: INTEROPERABILITY AND DATA FUSION FOR THE F-35

- Integrating the F-35 at a technical and tactical level. Supporting interoperability for the multi-generation combat air force
- Surpassing fusion to augment exploitation. Delivering a decisive PED function
- Delivering an information architecture which can support optimal decision-making for the F-35 pilot. How much information is enough, and how much can be processed without pilot input?



Brigadier General Stephen Jost, Director, F-35 Integration Office, **United States Air Force**

0950 MANAGING AND EXPLOITING DATA IN THE CONTESTED BATTLESPACE

- Fusing and sharing data in the contested operating environment
- Increasing the overall situational awareness of the combat air platform
- Safeguarding against information warfare. Sustaining information dominance by countering the threat from cyber and EW



Oscar Bladh, Deputy Chief Engineer, Gripen E, **FMV**

1030 MORNING COFFEE AND NETWORKING

1110 MAXIMIZING SENSOR FUSION TO ENHANCE SITUATIONAL AWARENESS AND C2

- Plugging the combat aircraft into the broader C4ISR architecture
- Role of the F-35 in enhancing situational awareness and C2 for the joint force.
- Bridging 5th generation information capabilities to legacy platforms



Scott 'Shark' McLaren, Test Pilot, **Lockheed Martin**

1140 CLOSING Q&A: IS INFORMATION THE CRITICAL ENABLER FOR THE FUTURE FORCE?

- Where will information dominance feature within the future capability balance?
- If information superiority is to be a core component of the future high-end fight, how can effect still be delivered when access to information is compromised? How do we effectively mitigate against the threat of IW and cyber attack?
- Is fusion the real challenge? How can the ISR capabilities of advanced combat air systems be exploited and disseminated in the context of the complex environment?
- To what extent is sensor and data fusion possible on existing platforms? What are the limitations?
- Are we adequately preparing for F-35 service-entry? How do we leverage the capabilities of existing platforms to field an effective mixed air combat force?

Moderated By:



General (Ret) Frank Gorenc, Former Commander, **U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command**

Panellists:



Brigadier General Stephen Jost, Director, F-35 Integration Office, **United States Air Force**



Oscar Bladh, Deputy Chief Engineer, Gripen E, **FMV**



Scott 'Shark' McLaren, Test Pilot, **Lockheed Martin**



Maj. Gen (Ret) Stan Gorenc, Air Dominance Mission Area, **Raytheon**

1220 NETWORKING LUNCH



LIGHT ATTACK FOCUS AFTERNOON: 13 NOVEMBER 2018

COUNTERING ASYMMETRIC THREATS: REFINING THE LIGHT ATTACK CONCEPT

The light attack fighter concept is gaining strength. As advanced platforms provide a high-spec option for the peer or near-peer adversary, the multi-role concept might nonetheless have its limits. There is a gap in the market for a lower-end fighter, which can deliver maximum lethality – at minimum cost and without extensive support – in a more permissive operating environment. The blueprint for that aircraft is still up for debate.

Topics of discussion in this section will include:

- Designing an effective blueprint for the light attack aircraft
- Establishing a sufficient baseline capability for a lower-end combat air platform
- Arming the light attack fighter; balancing lethality against the asymmetric threat
- Exploring a concept of operations for light attack missions

1400 KEYNOTE PRESENTATION: DEVELOPING NIGERIA'S FIGHTER CAPABILITY

- Acquiring JF-17s to support Nigeria's delivery of combat air power
- Deploying fighters against an asymmetric threat
- Upgrading unarmed jets to support effective ground strike



Air Marshal Saddique Baba Abubakar, Chief of the Air Staff, Nigerian Air Force

1430 ESTABLISHING AN AIRPOWER CENTRE OF EXCELLENCE FOR THE PAKISTAN AIR FORCE

- Adapting to the regional security environment. Operational experiences of deploying combat air capability on counter-terror operations
- Developing an airpower centre of excellence to support enhanced capability development and training
- Conducting training exercises as a means to identify existing gaps in Pakistan's combat air capability



Air Vice Marshal Irfan Ahmed, Airpower Centre of Excellence, Pakistan Air Force

1500 AN INTERNATIONAL PERSPECTIVE ON THE USAF LIGHT ATTACK PROGRAM

Colonel Jared Johnson, Chief of Disclosure, Weapons & Technology Release, US Air Force International Affairs

1530 AFTERNOON COFFEE AND NETWORKING

1600 READING AND DEPLOYING AIRPOWER AS PART OF AN INTEGRATED APPROACH TO COUNTER-INSURGENCY

- Acquiring combat air capability specifically to meet the asymmetric threat. Prioritising high manoeuvrability and supporting precision-guided munitions runs
- Deploying airpower as part of an integrated approach to airborne counter-insurgency. Integrating the fighter effectively alongside UAVs and helicopters
- Sustaining and maintaining Kenya's light attack aircraft fleet. Delivering through-life support for ageing aircraft



Senior Representative, Kenya Air Force

1630 AT-802 AND THE LIGHT ATTACK MISSION

- Synching Acquisition Strategy with Resources & Threat
- Impact of AT-802 Series on Modern Security Environment
- AT-802L Mission System, Payload, Endurance, Affordability

Colonel (Ret.) Tom "Lasher" Menker, Business

Development & Government Relations Representative, Air Tractor, Inc.



1645 TRAINING AND DEPLOYING TO MEET THE ASYMMETRIC THREAT

- Training the pilot for precision strike missions in the permissive operating environment
- Sustaining red air training capabilities to enhance readiness for contemporary operations against the asymmetric threat
- What support does the light attack combat pilot require to effectively execute the mission?



Air Vice Marshal M Abdul Bashar, Assistant Chief of Air Staff (Administration), Bangladesh Air Force

1715 DELIVERING MULTI-ROLE COMBAT AIR CAPABILITY TO SUPPORT REGIONAL AIR SUPERIORITY

- War-gaming with regional partners to strengthen interoperability
- Assessing the suitability of multi-role fighter capability as a means to meet both the symmetric and asymmetric threat
- Upgrading lightweight multi-role options to balance considerations of threat and cost



Senior Representative, Royal Malaysian Air Force

1745 CLOSING Q&A: DEFINING THE CAPABILITIES REQUIRED TO ADDRESS THE NON-PEER THREAT

- Supporting autonomy for the combat aircraft within the uncontested environment. Carrying out ISR and ground strike without extensive support
- What does the mission plan look like for counter-insurgency, counter-terror and air policing, and how should that mission plan be reflected in the blueprint for the light attack aircraft?
- Balancing lethality with affordability to justify the development of specific capabilities versus multi-role fighters
- How do air force chiefs protect budget for high-end capability and successfully make the case for a light attack capability? Can such a light attack force be justified through savings alone?

Moderated By:



Lieutenant General (Retd.) Klaus-Peter Stieglitz, Former Commander, German Air Force

Panellists:



Air Vice Marshal Irfan Ahmed, Airpower Centre of Excellence, Pakistan Air Force



Air Vice Marshal M Abdul Bashar, Assistant Chief of Air Staff (Administration), Bangladesh Air Force



Senior Representative, Kenyan Air Force

1815 CLOSE OF DAY ONE

1700 CLOSE OF CONFERENCE

MAIN CONFERENCE DAY ONE: 14 NOVEMBER 2018

CONFRONTING THE THREAT IN THE FUTURE AIR DOMAIN

0730 REGISTRATION AND COFFEE/OPENING REMARKS

0830 INTERNATIONAL FIGHTER CONFERENCE OPENING CEREMONY

Opening Remarks from Defence IQ

Benjamin McClatchie, Senior Defence Producer, International Fighter 2018

OPENING REMARKS FROM THE LEAD SPONSORS & CONFERENCE PARTNER

AIRBUS  **Raytheon**

OPENING REMARKS FROM THE CONFERENCE CO-CHAIRS



General (Ret) Frank Gorenc, Former Commander, U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command



Lieutenant General (Retd.) Klaus-Peter Stieglitz, Former Chief of Staff, German Air Force

0930 HOST NATION OPENING KEYNOTE: GERMAN VIEW ON A EUROPEAN SOLUTION FOR A FUTURE COMBAT AIR SYSTEM FOR THE 2040s



General Gerald Funke, Head of Division Strategic Defence Planning and Concepts, Federal Ministry of Defence, Germany

1000 EXTENDING MODERN AIR WEAPON SYSTEM CAPABILITIES WITH UNMANNED SUPPORT ELEMENTS

- Combining and Teaming of manned and unmanned assets
 - Artificial Intelligence and Swarming to support complex missions
 - Applications and development outlook
- Senior Representative, Airbus**

AIRBUS

1030 CANADA'S FUTURE FIGHTER CAPABILITY PROJECT

- Refining the future fighter concept for Canada
- Identifying the critical effectors for a future combat air system
- Enforcing Canada's sovereignty through the decisive deployment of combat airpower. Linking in airpower with a broader approach to national security



Major General Alain Pelletier, Chief of Fighter Capability, Royal Canadian Air Force

1100 THE FUTURE BATTLESPACE - A EUROPEAN PERSPECTIVE

- Challenges on interoperability
- The role of robust military effectiveness
- The key role of sovereignty on information

Senior Representative, Eurofighter

Eurofighter Typhoon

1130 MORNING COFFEE AND NETWORKING

1200 THE ROLE OF THE COMBAT FIGHTER WITHIN THE JOINT FORCE

- Integrating the fighter with the joint force. Exploiting the information capabilities of advanced combat aircraft to support C4ISR for the multi-domain operation
- Managing the challenge of the contested environment. Sustaining survivability and information dominance for operations in the complex battlespace
- Delivering a global reach for Air Combat Command. Sustaining and supporting the F-35 for a global operating environment



Major General Scott J Zobrist, Commander, 9th Air Force, Air Combat Command, United States Air Force

1230 INDUSTRY LEADERS' PANEL DISCUSSION: DO AIR FORCE REQUIREMENTS MATCH THE DEMANDS OF THE CURRENT AND FUTURE BATTLESPACE?

- What should the future capability balance look like? What should the balance be between lethality and stealth, and how can survivability be maximised?
- If information is to be the decisive enabler for future airpower, what opportunities are there to improve the fusion of data aircraft to aircraft and across the joint force?
- Do emerging concepts for next generation combat air systems take satisfactory account of the current risk threshold? Is a manned fighter a viable options for the future high-end fight?

Moderators:



General (Ret) Frank Gorenc, Former Commander, U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command



Lieutenant General (Retd.) Klaus-Peter Stieglitz, Former Chief of Staff, German Air Force

Panellists:

AIRBUS

Eurofighter Typhoon

Raytheon

LOCKHEED MARTIN

LEONARDO

TOP ACES

1330 NETWORKING LUNCH

'Great opportunity to network with leadership from both industry and militaries from around the world and hear about the issues impacting each of them'

2017 USAF Attendee

1700 CLOSE OF CONFERENCE

THE CONTESTED ENVIRONMENT

1430 **AFTERNOON KEYNOTE: DEPLOYING AIR POWER IN EUROPE**

- Air power's role in enforcing security for Ukraine
- Upgrading capability to meet the challenge of the dense and contested battlespace
- Integrating the fighter as a core component of a joint force approach to deterrence



Colonel General Sergii Drozdov, Commander, **Ukrainian Air Force (Or Officer Representing)**

1500 **NEXT GENERATION WEAPON SYSTEM, THE SPANISH MOD VISION TOWARDS 2035+**

- Which will be the effectors that support air superiority and precision strike for the future environment?
- Upgrading platforms to take advantage of advanced air weaponry
- Delivering effect in the contested battlespace



Brigadier General Leon-Antonio Maches Michavila, Head of Air Systems NAD, Directorate for Programmes, **Spanish Ministry of Defence**



Colonel Enrique Martinez Vallas, Directorate for Programmes, **Spanish Ministry of Defence**

1530 **PANEL DISCUSSION: PREPARING FOR THE FUTURE FIGHT – TOWARDS A TRULY MULTI-DOMAIN CONCEPT OF OPERATIONS**

- Delivering combat airpower in an information age. Achieving information superiority and exploiting it to attain decision advantage
- How will the fighter's increased mobility, ISR and global strike support the more comprehensive delivery of airpower in the joint space?
- Delivering airpower within a truly-multi domain battlespace. Integrating space, cyber and the electromagnetic spectrum for operations in the denied and contested environment
- How can the superior-information gathering capacity of advanced combat air systems be used to benefit missions that include legacy platforms?

Moderator:



Lieutenant General (Retd.) Klaus-Peter Stieglitz, Former Chief of Staff, **German Air Force**

Panellists:



Colonel Jean-Christopher Boeri, Senior Air Component Commander, Operation Inherent Resolve, **French Air Force**



Colonel (PhD) Gjert Lage Dyndal, Deputy Head of Strategic Analysis Capability, **NATO HQ**

1600 **AFTERNOON COFFEE AND NETWORKING**1630 **HOST NATION INSIGHT: GERMAN SECURITY AND DEFENCE POLICY – TOUR D'HORIZON**

- An overview of Germany's security and defence policy
- Airpower's role within the contemporary security environment
- Preparing for the future threat environment. Updating policy priorities to reflect the demands of hybrid warfare



Colonel Frank Graefe, Head of Division, Defence Policy, **Executive Group Information Centre German Ministry of Defence**

1700 **PANEL DISCUSSION: STRESS TESTING CURRENT CAPABILITIES TO REFINE A CONCEPT FOR THE NEXT GENERATION FIGHTER**

- Inserting NATO's current force structure within a high-end combat situation. Which capabilities would give out first

in the contested environment?

- Defining a next generation combat air concept. Balancing range, lethality, survivability, affordability and interoperability
- What effectors will define the future combat air system?
- How valid is a network-centric concept of operations? Will information reliance prove to be a critical weakness within the future air domain?
- Attrition as a characteristic of the future combat air environment. Are UCAVs the way forward?

Moderator:



General (Ret) Frank Gorenc, Former Commander, **U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command**

Panellists:



Colonel (PhD) Gjert Lage Dyndal, Deputy Head of Strategic Analysis Capability, **NATO HQ**



Wing Commander Andre Adamson, European Bilateral Relations & EU Exit (EBRX), **UK MoD**



Justin Bronk, Research Fellow, **RUSI**



Dr Jamie Shea, Professor of Strategy and Security, **University of Exeter**

1730 **PANEL DISCUSSION: THE NATO WAR IN KOSOVO—30 YEARS ON AND THE LESSONS LEARNED AND APPLIED**

The NATO campaign in Kosovo, based on the gradual application of military force, received considerable criticism from military strategists and others despite the fact that it ultimately did compel Milosevic's withdrawal at no cost in NATO lives and led to a period of widespread belief that wars can be won with air power alone. What were the shortcomings of the campaign and which, if any, of the lessons learned have been applied?

- What were the principal lessons learned from the Kosovo campaign? Are they of any value to future air campaign against a hybrid threat?
- What lessons did our adversaries learn from this conflict and how have they manifested themselves?
- How has the chain of command within NATO evolved to enable rapid and decisive effects on the ground?
- How has the military-political interface been streamlined to avoid the constraints that hampered the Kosovo campaign and to avoid the ceding of time and initiative to a future aggressor?
- To what extent has the capability gap between the US Air Force and its European allies been addressed so as to be able to field a balanced and capable application of air power in a future conflict?

Moderator:



General (Ret) Frank Gorenc, Former Commander, **U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command**

Panellists:



Lieutenant General (Retd.) Klaus-Peter Stieglitz, Former Chief of Staff, **German Air Force**



Maj. Gen (Ret) Stan Gorenc, Air Dominance Mission Area, **Raytheon**

1800 **CLOSE OF MAIN CONFERENCE DAY ONE**1810 **NETWORKING DRINKS RECEPTION**

Hosted By: **Raytheon**

1900 **INTERNATIONAL FIGHTER CONFERENCE 2018 GALA DINNER Attendance by Invitation Only**

Waldorf Astoria Hotel, Berlin

Hosted By: **AIRBUS** **Eurofighter Typhoon**

MAIN CONFERENCE DAY TWO: 15 NOVEMBER 2018

TRAINING AND DEPLOYING JOINT AIR POWER

0800 REGISTRATION AND COFFEE

0845 OPENING REMARKS FROM THE CONFERENCE CO-CHAIRMEN



General (Ret) Frank Gorenc, Former Commander, **U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command**



Lieutenant General (Retd.) Klaus-Peter Stieglitz, Former Chief of Staff, **German Air Force**

LEVERAGING AIR POWER AS A CORE COMPONENT OF THE FUTURE JOINT FORCE

0900 OPENING KEYNOTE FROM THE US MARINE CORPS



Brigadier General Bradford J. Gering, Assistant Deputy Commandant for Aviation, **US Marine Corps**

0930 CHALLENGES AND EXPECTATIONS FOR THE UK'S LIGHTNING FORCE

- Generating an Initial Operating Capability for the F-35
- Successfully integrating the F-35 as a leading asset for UK Defence and the future joint force. Maximising interoperability to fully capitalise on the capabilities of the aircraft
- Delivering a training model to support readiness for future F-35 operations in the contested environment



Air Commodore David Bradshaw, Lightning Force Commander, **Royal Air Force**

1000 AIRPOWER AS A FUNDAMENTAL DETERRENT FOR NATO

- Delivering airpower as a core component of NATO deterrence
- Interoperability for NATO's air network. Enhancing data fusion and exploitation across the multinational air force
- Retaining air superiority in the context of the contested environment



Lieutenant General Rubén C. Garcia Servert, Commander, **NATO Combined Air Operations Centre Torrejon**

1030 MORNING COFFEE AND NETWORKING

1100 ADAPTING THE FRENCH AIR FORCE TO FACE AN OPERATING ENVIRONMENT WHICH IS INFORMATION-CENTRIC AND MULTI-DOMAIN

- The national road map for French airpower from 2020-2035. Defining the parameters of future air capability
- Delivering digital transformation to support operational effectiveness at both short and long-range
- Engaging NATO and France's operational partners in the digital transformation effort. Enhancing interoperability



Colonel Etienne Faury, Head of Plans, **French Air Force**

1130 COMMANDERS' STRATEGY DEBATE

- What does the information age mean for airpower? Has the rise of information as a critical enabler been satisfactorily integrated within airpower concept, doctrine and capability?
- What is the biggest challenge for airpower in the immediate timeframe?
- What does the future manned/unmanned balance look like? Will UCAVs define the post-2030 battlespace?
- What is the one thing we can all agree on and implement that will have a significant impact on acquisition reform?

Moderators:



General (Ret) Frank Gorenc, Former Commander, **U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command**

Panellists:



Lieutenant General Rubén C. Garcia Servert, Commander, **NATO Combined Air Operations Centre Torrejon**



Major General Alain Pelletier, Chief of Fighter Capability, **Royal Canadian Air Force**



Air Vice Marshal Irfan Ahmed,

Airpower Centre of Excellence, **Pakistan Air Force**

1230 NETWORKING LUNCH

1400 TRAINING FOR THE FUTURE FIGHT

- Improving the training model to accurately simulate the demands of the A2/AD operating environment
- How can industry and operators develop an LVC training model that gets maximum use from live and synthetic training assets?
- Sustaining the contribution of live aggressor training to the overall operational readiness of the warfighter



Brigadier General Ioannis Gerolimos, Director of Exercises and Operational Training Directorate, **Hellenic Air Force**

1430 TRAINING PANEL DISCUSSION: HOW MUCH DATA IS TOO MUCH DATA?

The information capabilities of new and future platforms demand a renewed approach to training and development. If tomorrow's pilot is to effectively exploit the data that these aircrafts will provide, they must be able to prioritise and act on information at speed, and to adapt the ways in which they acquire and engage a target.

- Might the information-age pilot suffer from data overload? Training the pilot to take advantage of increased situational awareness and C2
- Prioritising tasks in a data-heavy setting and adjusting when data is "downed"
- How is Artificial Intelligence being leveraged to enhance TTPs in a future training regime?



Moderator: **General (Ret) Frank Gorenc**, Former Commander, **U.S. Air Forces in Europe, U.S. Air Forces Africa, NATO Allied Air Command**



Panellists: **Brigadier General Ioannis Gerolimos**, Director of Exercises and Operational Training Directorate, **Hellenic Air Force**



Lieutenant Colonel Tomaña, Chief of Tactical Air Force Combat Training Branch, **Czech Air Force**



Wing Commander Martin Rendall, Officer Commanding, Air Battlespace Training Centre, **Royal Air Force**

1500 DELIVERING RED AIR TRAINING FOR THE CONTESTED ENVIRONMENT

- Updating live training capabilities and process to support readiness for the contested environment
- Equipping the pilot to meet the A2/AD threat. Training against offensive information warfare
- Training for air-air combat against a peer threat



Lieutenant Colonel Tomaña, Chief of Tactical Air Force Combat Training Branch, **Czech Air Force**

1530 AFTERNOON COFFEE AND NETWORKING

1600 UPDATING THE COLLECTIVE TRAINING MODEL

- Delivering a training experience fit for the demands of contested operating environments
- Improving decision-making for pilots in the modern battlespace
- The complementary nature of live and synthetic training experiences. Where can simulation fill existing gaps, and to what extent is it realistic to reduce live training time?



Wing Commander Martin Rendall, Officer Commanding, Air Battlespace Training Centre, **Royal Air Force**

1630 MARITIME AIR POWER FOR THE FUTURE

- Changing global and regional security dynamics
- New technologies influencing the maritime air warfare domain
- The need for Fusion, but challenges come with it
- Aircraft Carriers back in fashion, why?



Colonel (PhD) Gjert Lage Dyndal, Deputy Head of Strategic Analysis Capability, **NATO HQ**

1700 CLOSE OF CONFERENCE