SMi present its 15th annual conference on...

Unmanned Aerial Systems

Examining the Integration of Unmanned Systems
Holiday Inn Kensington Forum, London, UK

19th - 20th NOV 2015

"Excellent range of topical subjects from well-placed, knowledgeable speakers.”
Delegate 2014

WHY ATTEND THIS EVENT:

• Examine the integration of UAVs into protected national and international air space
• Discuss the influence of commercial technology developments and give a critical analysis of the ramifications of these on the military
• Evaluate the importance of scale and the impact of small and nano-sized UAVs on training and operations
• Debate the use of autonomous UAVs in ISR, combat support and law enforcement
• Explore the measures being taken to counter UAS strikes

CHAIRMAN 2015:
Squadron Leader (Ret’d) Keven Gambold, CEO, Unmanned Experts

EXPERT PANEL INCLUDES:

Lieutenant Colonel Matthew A. Dooley, Chief Unmanned Ground Systems/Lethality Branch, HQ TRADOC United States Army*

Colonel Robert Kiebler, Commander, 49th Wing, Holloman AFB, United States Air Force

Colonel Enrique Martinez, Chief of the Acquisition Programs Section, Spanish Air Force

Colonel Birger Mejholm, Commander, Danish Army Intelligence Centre, Danish Army

Captain Nicklas Fredriksson, Squadron Commander 2IC, TUAV, Swedish Armed Forces

Intendant Carlos Henrique Madureira Ribeiro, Head of Operations, Portuguese Police Force

Jean-Youri Marty, Deputy Director, Capability, Armament & Technology Directorate, European Defence Agency

Tom Buckner, RPAS & Airworthiness Staff Officer, NATO HQ

PLUS AN INTERACTIVE HALF-DAY PRE-CONFERENCE WORKSHOP
WEDNESDAY 18TH NOVEMBER 2015 | 12.30PM – 5.30PM

Counter-UAS: The Next Arms Race?

Hosted By: Squadron Leader (Ret’d) Keven Gambold, CEO, Unmanned Experts

www.uasconference.com
Register online or call us on +44 (0) 20 7827 6000
8.30  Registration & Coffee

9.00  Chairman’s Opening Remarks  
Squadron Leader (Ret’d) Keven Gambold, CEO, Unmanned Experts

UAVs in Operations

Opening Keynote Address

9.10  U.S. Air Force Remotely Piloted Aircraft Training  
- RPA 101  
- Training and working with our International partners  
- Pilots and sensor operators  
- Challenges and successes  
Colonel Robert Kiebler, Commander, 49th Wing, Holloman AFB, United States Air Force

9.50  2025 Horizon of the Unmanned Aerial Systems in the Spanish AF  
- Class I Systems: the Air Force as facilitator  
- Class II Systems: Licenses and Training, The UAS School  
- Class III systems:  
  - 2015: The interim solution, what we need now  
  - 2020: The EMALE, what the national industry wants to develop  
  - 2025: The EuroMALE, international cooperation  
  - 2025+: UCAVs? What the Air Force really wants  
Colonel Enrique Martinez, Chief of the Acquisition Programs Section, Spanish Air Force

10.30  Morning Coffee

11.00  The Use of UAV in Police Work - The Portuguese  
- The protocol  
- Technical requirements from the police  
- Missions: Experimental and Operational phases  
- Operational and Technical Problems faced  
Intendant Carlos Henrique Madureira Ribeiro, Head of Operations, Police Special Unit, Portuguese Police Force

11.40  UAV Integration within the Swedish Army  
- Evaluating the impact of UAV’s in supporting ISR operations and enhancing combat capabilities  
- Reviewing developments in national air space integration from a military and civilian perspective  
- Discussing the ramifications on the training of military personnel  
- Looking at the likely future trends of UAV usage by the Swedish Army  
Captain Nicklas Fredriksson, Squadron Commander 2IC, TUAV, Swedish Armed Forces

12.20  Networking Lunch

1.20  NATO’s RPAS Activities and Goals  
- NATO’s RPAS Policy & Objectives  
- Work of RPAS-Related NATO Organisations  
- Alliance Ground Surveillance System (NATO’s Rs  
- Q-4 HALE RPAS Coming in 2017-18)  
- RPAS Exercise Program  
- RPAS Standardization Efforts  
- International RPAS Cooperation  
Tom Buckner, RPAS & Airworthiness Staff Officer, NATO HQ

2.00  AETHER – Persistent Aerial Surveillance using a Small Unmanned Aircraft System  
- Tethered UAS  
- Persistent Stare  
- Indefinite Endurance  
- Low-cost system solution  
Dr Stephen Prior, Reader in Unmanned Air Vehicles, Aeronautics, Astronautics and Computational Engineering, University of Southampton

2.40  Afternoon Tea

3.10  Danish Small Unmanned Aircraft System in Operations  
- The system, PUMA AE  
- National operations and exercises  
- International operations (Afghanistan and Iraq)  
- Flying military SUAS in Danish Civilian Airspace  
Colonel Birger Mejlholm, Commander, Danish Army Intelligence Centre, Danish Army

Panel Discussion:

3.50  Autonomous Weaponised Drones  
- Future Warfare & Ethics  
- Discussing what the current state of “lethal autonomy” and when will it be ready for the battlefield  
- Debating the benefits versus the disadvantages of autonomous drones  
- Examining state of legislation and ethical humans rights arguments in relation to autonomous technology  
- How sophisticated are the algorithms? Is “humanity” necessary to make the correct split second decision between friend and foe?  
Intendant Carlos Henrique Madureira Ribeiro, Head of Operations, Police Special Unit, Portuguese Police Force  
Dr Stephen Prior, Reader in Unmanned Air Vehicles, Aeronautics, Astronautics and Computational Engineering, University Of Southampton  
Dr Donough Wilson, Innovation Lead, Aviation, Defence and Homeland Security Innovation, VIVID/futureVision

4.50  Chairman’s Closing Remarks and Close of Day One

Register online at www.uasconference.com • Alternatively fax your registration to +
8.30  Registration & Coffee

9.00  Chairman’s Opening Remarks
Squadron Leader (Ret’d) Keven Gambold, CEO, Unmanned Experts LLC

9.10  KEYNOTE ADDRESS
Lieutenant Colonel Matthew A. Dooley,
Chief Unmanned Ground Systems/Lethality Branch, HQ TRADOC United States Army*
George K. Gonsalves, Unmanned Aircraft Systems and Aviation Analyst, HQ TRADOC United States Army*

AIR SPACE INTEGRATION & POLICY

9.50  Preparing the future for European RPAS
• Developing solutions to ensure safe air traffic integration (including sense & avoid)
• The need for reliable and efficient SATCOM links
• Towards a European solution in the MALE RPAS segment
• The strong dual use dimension of RPAS related activities
Jean-Youi Marty, Deputy Director, Capability, Armament & Technology Directorate, European Defence Agency

10.30  Morning Coffee

11.00  The European RPAS Roadmap - RPAS Activities in SESAR 2020
• Assessing how SESAR aims to ensure the safe and seamless integration of RPAS into the European Aviation System – particularly within the context of the Single European Sky (SES) initiative
• Evaluation of insight from SESAR RPAS demonstration activities bringing together operators, manufacturers, air navigation service providers (ANSPs) and regulatory authorities
• Aligned with the EU RPAS Roadmap, definition of the future R&D RPAS activities in SESAR 2020 Programme; the aim of this phase is to provide also the basis for RPAS requirements within the edition 2015 of the European ATM Master Plan
• Explore current and future market trends, building scenarios related to the market, various industries, the RPAS value chain and the institutional framework needed for integration
Jean-Youi Marty, Deputy Director, Capability, Armament & Technology Directorate, European Defence Agency

3.20  Afternoon Tea

TECHNOLOGY & FUTURE THINKING

2.00  Civilian UAS Under a Transportation Policy Lens
• Looking at the role of automation in transportation across modes
• The economics of UAS for transportation
• UAS and humanitarian relief – when conventional transportation fails
• Aligning the regulator and the innovator
• Social acceptability
Alain Lumbroso, Economist, International Transport Forum, OECD

2.40  Air Space Integration, Innovation & Legislation Synergy
• Reviewing the current state of air space integration from both a national and international perspective
• What are the challenges in civilian versus military UAV air space management?
• Evaluating the procedural standards on construction, reliability and safety of UAV
• Where are we in relation to international synergy and cooperation
Alain Lumbroso, Economist, International Transport Forum, OECD

11.40  Current and Future Use of UAV’s by the British Armed Forces
• Examining the current use of UAV’s by the British Armed Forces
• Analysing trends and increased future use of UAV
• Parliamentary scrutiny of UAV usage by the British Armed Forces
• SWOT Analysis of UAV usage
Louisa Brooke-Holland, Defence Analyst, House of Commons

3.50  Use of Unmanned Combat Aerial Vehicles Against Air Threats; Necessity and Feasibility
• The decreasing effectiveness of manned aircraft
• Overcoming the limitations of unmanned combat aerial vehicles
• New tactical and strategic roles for unmanned combat aerial vehicles
• Playing on the West’s advantages
Dr Hans Heerkens, Assistant Professor, Behavioural, Management & Social Sciences, University Of Twente

• Present new thinking on next generation unmanned air systems and examining the key areas for this influential design thinking including:
  • radical new vehicle forms not limited by legacies carried over from manned aircraft
  • Illustrate game-changing designs for super-massive trans-oceanic unmanned search and rescue vehicles, and immediate response humanitarian aid mission vehicles
  • Propose remote, autonomous, air-to-air refuelling which could extend the on-site mission capability of these vehicles up to weeks or months at a time
  • Evaluate developments in edge-of-space communications and internet broadband relay vehicles
Dr Donough Wilson, Innovation Lead, Aviation, Defence and Homeland Security Innovation, VIVID/futureVision

5.10  Chairman’s Closing Remarks and Close of Day Two
*subject to final confirmation
Overview of workshop:
Despite export restrictions, advanced unmanned aircraft technology is now available to all comers, both civil and military, and their use is now commonplace in conflicts (Iraq today), skirmishes (Israel), border disputes (Georgia) and even in just keeping an eye on your neighbours (South China Sea). Military forces and Nation States are just waking up to the threat they pose and efforts to counter UAS / RPAS are relatively nascent. On the civilian side, the potential for terrorist use (the White House), industrial espionage (Apple’s headquarters), or even causing riots (Serbian soccer match) has security officials scrambling to find a solution. Herein we review the threat, some approaches to counter it, and some efforts to counter the counter...

Why should you attend this workshop:
If you are attending a UAS Conference then this topic is going to be very important to you and your efforts in the coming months and years. Become wise to the issues and the potential solutions before it is too late!

Agenda:
12.30       Registration & Coffee
1.00        The UAS Threat
    •  Review the Proliferation of Military Systems
    •  Provide examples of ‘other’ nations UAS use
    •  Study civil UAS / drone capabilities
    •  Examine recent examples of civilian ‘infringements’
2.00        Afternoon Tea
2.30        Military Counter UAS Efforts
    •  List the vulnerabilities of unmanned aerial systems
    •  Look at current fielded military C-UAS capabilities
    •  Review developing capabilities and programs
3.00        Counter Civilian UAS
    •  Highlight the difficulties of Civilian Counter-UAS
    •  Overview of current systems in development
3.30        Coffee Break
4.00        Counter C-UAS: The Arms Race
    •  Study efforts to ‘harden’ current Unmanned systems
    •  Provide outlook of future tech developments in C-UAS
5.00        Review of Workshop - Discussion, Questions & Answers
5.30        Close of Workshop

About the workshop host:
Leading a highly-trained and professional organisation on the cutting-edge of commercial and military technology adoption and operations. Dedicated military officer with an exceptional 18-year track record of planning and leading major multi-national programs and teams. An award winning instructor, evaluator and combat-experienced pilot on multiple aircraft types, including jet fighters and unmanned systems, with over 3600 total hours. A leadership, personnel welfare management, technical innovation and equipment procurement expert who is well-versed in team building across functional lines. Highly experienced in fast moving, rapidly changing environments with significant time pressures. A self-motivating and diligent individual with Commendations both airborne and on the ground. Widely traveled for projects, austere operations and overseas postings. Current Top Secret clearance, valid until 2016 and Masters-level education (Aeronautical Science) with CMI affiliation. Powerful, media-trained, communicator and reliable authoritative supervisor. Currently JAA Commercial Pilot License and studying German.

About Unmanned Experts:
Unmanned Experts prides itself on both its name and its reputation; these elements stem directly from our carefully selected and highly-trained personnel. This growing, independent team of exceptional professionals has over 25,000 flying hours on UAS platforms and over 35,000 flying hours on manned aircraft. With Remotely Piloted Aircraft System (RPAS) pilots, operators and maintainers as well as specialists with expertise in all areas of unmanned operations. Unmanned Experts provides dependable, approachable and affordable mentorship in the UAS sector.
Sponsorship and Exhibition Opportunities
SMi offer sponsorship, exhibition, advertising and branding packages, uniquely tailored to complement your company’s marketing strategy. Prime networking opportunities exist to entertain, enhance and expand your client base within the context of an independent discussion specific to your industry. Should you wish to join the increasing number of companies benefiting from sponsoring our conferences please call: Sadia Malick, Director on +44 (0) 20 7827 6748 or email: smalick@smi-online.co.uk

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Are you interested in promoting your defence services to a targeted industry sector? SMi offer tailored marketing packages so that your association/publication can gain access to a global market and key decision makers in the defence market.

Contact Sarah Watson on +44 (0)20 7827 6134 or email swatson@smi-online.co.uk

SMI DEFENCE FORWARD PLANNER

June

Future Armoured Vehicles Eastern Europe
22nd - 23rd June 2015
Prague, Czech Republic

Helicopter Technology
Eastern Europe
24th - 25th June 2015
Prague, Czech Republic

July

Air Mission Planning
6th - 7th July 2015
London, UK

September

Military Flight Training
16th - 17th September 2015, London, UK

MilSatCom Latin America
22nd - 23rd September 2015
Maceio, Brazil

Defence Exports
30th September – 1st October 2015
Amsterdam, The Netherlands

October

Airborne ISR
26th – 27th October 2015, London, UK

November

Global MilSatCom
3rd - 5th November 2015, London, UK

Social Media in the Defence & Military
19th – 20th November 2015
London, UK

UAS
19th – 20th November 2015, London, UK

December

Future Armoured Vehicles Survivability 2015
23rd - 24th November 2015, London, UK

Military Airlift & Rapid Reaction Operations
1st – 2nd December 2015
Seville, Spain