

AGENDA DAY ONE

09:00 Chairman's Opening Remarks

LtCol (Retd) Andrew Tate, Former Ground Indirect Fires Officer, United States Marine Corps.

Lt Col Tate was a career Artillery Officer in the United States Marine Corps with extensive experience of Indirect and Joint Fires. During his staff appointments LtCol Tate worked closely with the US Army and the US Air Force on Joint Fires issues to ensure interoperability and reduce the duplication of effort. LtCol Tate has also worked Joint Fires issues with Joint and Coalition partners via the Joint Fire Support Executive Steering Committee. As a result of this experience LtCol Tate is ideally qualified to Chair the conference and lead discussion.

09:10 – The UK Route to Modernised Divisional Fires.

Col Eamon Welch, AH Joint Effects in Ground Manoeuvre, British Army Headquarters

- Future challenges & UK Context
- Strike brigades and the warfighting division.
- Future Capability Projects
- Training & challenges.

10:10 – Soft Recoil and Mobile Howitzers

Mark McDonald, Major General, retired, US Army, Consultant to AM General

- The future
- Deployable and survivable
- Sustained Lethality

10:30 - Coffee

11:00 – Future challenges for Weapon Location Sensors

Bård Frostad, Senior Military Advisor, Artillery, Radar Solutions, SAAB AB

- High Tempo Operations
- Survivability
- Command & Control
- Electronic Warfare
- Realistic training

11:20 – U.S. Army Fires in Multi-Domain Operations

Colonel Chris Compton, Chief, Concepts Development, U.S. Army Fires Center of Excellence

- Core ideas in Army Fires Functional Concept
- Development of long-range fires capabilities
- Theater Fires Command (Europe), from concept to force design
- Fighting with Fires in large scale combat

12:00 – Vehicle mounted Mobile Sound Ranging Array

Alex Koers, Director, Microflown AVISA

- The need for persistent passive surveillance
- Vehicle mounted Mobile Sound Ranging Array
- Recent findings
- Need for long range fire testing

12:30 – Lunch

14:00 – Muzzle velocity radars for artillery – enhancing effect delivery on modern and legacy gun systems

Mr. Finn Kobberø, System Manager for muzzle velocity radars systems & Sales Director, Weibel

- Main factors on dispersion of artillery rounds
- How to enhance the effect delivery on new and legacy gun systems

14:30 – Swedish Army Future Fire Development

LtCol. Niklas Edelsvärd, Commanding Officer Swedish Artillery School

- Swedish Armed Forces growth
- Conclusions from Future Fires Study
- Future development of indirect fire systems

15:00 – Long Range Precision Ammunition

Svein Daae, Director Marketing and Sales, Product Sales Responsible GLSDB, Saab Dynamics

- Launcher independent
- Programmable attack
- Variety of warheads
- Successful test firing

15:30 – Tea/Coffee

16:00 – Counter-Battery struggle in the conflict in the East of Ukraine

Major-General Andrii Koliennikov, Deputy Director, Central Scientific Research Institute of the Armament and Military Equipment Directorate, Armed Forces of Ukraine

- Overview of current Ukrainian indirect fire capability and an update into the current conflict in the Donbass
- Operational feedback of recent reconnaissance, surveillance and fire control activities
- The direction for the development of combat efficiency to increase damage and reconnaissance capability.

16:30 – Group Discussion – Operating in the Modern Threat Environment

The Group will review ideas generated by idea boards along with two to three modern threat scenarios from a Red Cell. The expectation is that the group will add or clarify anything that is presented, propose solutions--either current or future, and identify if the collective community thinks we have a capability gap.

17:30 – Conference Adjourns

17:30 – 19:00 Networking Drinks

AGENDA DAY TWO

09:00 – German Indirect Fires Capabilities - Managing Future Challenges

Lt Col Uwe Kraft, Chief Fires; Army Concepts and Capabilities Development Centre (ACDC), German Army

- Regrouping DEU indirect fires capabilities to a new force structure
- Adjustment of DEU Joint Fires capabilities
- Improving ammunition for A2AD and long range precision effects
- Integration of digital C2 capabilities as a key factor for Counter Battery Fires

09:30 - Prosecuting Area Targets in the Deep - Maximising Weight of Fires

**Anthony Lewis, Senior Engineer, Defence Science and Technology Laboratory (DSTL) presenting on behalf of:
Ricky Hart, Principal Adviser for Land Weapon Systems, Defence Science and Technology Laboratory (DSTL)**

- Dstl have been looking at the challenge of prosecuting dispersed and concentrated targets in the deep with a range of conventional effectors from suppression of Threat AD, winning the counter battery fight, and supporting the close combat operations.
- Dstl have conducted a comprehensive review of threat tactics from converged to dispersed threats and developed some generic target laydowns to assess the effectiveness with different rocket payloads including unitary, area effects, dispensed munitions and terminally guided munitions.
- The purpose of the study is to inform the debate over lower cost coordinate attack munitions to expensive highly discriminating sub-munitions with a range in between and provide evidence to support capability requirements.

10:00 – Industry - TBD

10:30 – Coffee

11:00 – Finnish Artillery Development

Maj Jari Luikku, Program Manager for Army ISTAR programs, Army Command Finland

Finnish artillery development programs 2020-2030 including K9 SPH, MLRS, towed guns, ammunition, C2 and artillery radars.

11:30 – The Fires Interoperability Challenge – A Canadian Perspective

Col Sonny T. Hatton, CD, Director of Artillery, the Royal Regiment of Canadian Artillery (RCA)

- Status of Interoperability within the Canadian Armed Forces (CAF), incl ongoing projects
- Structural and Doctrinal Interoperability, a case study of the fires support challenges within eFP BG Latvia and the Latvian Mech Inf Bde
- Key takeaways and the CAF/RCA way ahead

12:00 – Development of French Army Artillery Capabilities

COL Christopher MALOD, Director of Studies & Prospective Artillery, French Army

- Current French Artillery organization and equipment
- Improvement of French Artillery based on feedback from operations
- Developing future artillery to face near-peer threats

12:30 - Lunch

14:00 – Train for the Fight tonight and plan training for the Fight tomorrow

Lt Col David Clarke, Chief of Staff, Royal School of Artillery, British Army

The RSA will present on the challenge of training against new equipment. Technology is outpacing the 'human in the loop' and the RA is now stove-piped in many of its artillery systems within a single regiment. So, as we strive to maintain excellence from the individual upwards, we are challenged in training. It starts with individual trade training, which the RSA oversees on behalf of CFA and DLW. Training must be a key thought during procurement and upgrading or we will never be able to operate and fight effectively. Simulation, emulation etc are key – maintaining currency and competency is a significant threat to sustaining capability.

14:30 – U.S. Marine Artillery

LtCol Rob Groceman, Artillery & Rockets Capabilities Integration Officer, Combat Development & Integration, Headquarters, U.S. Marine Corps

- Overview of Marine Artillery
- Artillery Systems
- Future Initiatives

15:00 – Combat Development of the Italian Artillery

Col Tommaso Capasso, Chief of Targeting section, Italian Army Artillery HQ

The presentation will cover the ongoing upgrade of the Italian Army artillery with specific emphasis on the towed howitzer capability (FH 70) with some notes regarding the opportunity to employ long range precision ammunition.

15:30 – US Army Precision Guided Munitions Modernization

Lt Col Pat Farrell, Product Manager - Precision Fires & Mortars (PdM PFM), Project Manager - Combat Ammunition Systems (PM CAS), Joint Program Executive Office - Armaments & Ammunition (JPEO A&A)

16:00 – Estonian Indirect Fires Transformation and Developments

Lt Col Arbo Probal, Artillery Inspector, Engagement Capability section, Analysis and Planning Department, Headquarters of the Estonian Defence Forces

- Lessons learned when observing latest conflicts
- Artillery now and in the close future
- Digitalisation of fire support command and control

16:30 – Chairman's wash up Conference Closes

AGENDA DAY ONE

09:00 Chairman's introduction & welcome

Christopher F Foss, Contributing Editor to IHS Jane's Defence Review and Jane's Land Consultant.

Until 1st August 2017 Christopher was the founder and editor of Jane's Armoured Fighting Vehicles and co-editor of Jane's Artillery and Air Defence and Jane's Logistic Support and Unmanned. He previously also conceived and edited Jane's Land Warfare Platforms Systems Upgrades and launched Jane's Defence Review which was subsequently taken into Jane's Defence Weekly.

Christopher has lectured on armoured vehicles and other weapon systems in many countries including Brazil, China, Germany, Italy, Romania, Russia, Switzerland, Singapore, UK and the USA and has now driven some 50 vehicles, tracked and wheeled.

09:10 The Historic, Current & Emerging Role of Mortars in Land Warfare

Col John Musgrave, DACOS Empowerment, British Army

- Evolution of the modern mortar
- The greater lethality of the mortar over artillery fire
- Closing the last 300m and mortar calibres
- Divergent technologies: Heavy, Automatic and Low Recoil Mortars and the Gun Mortar
- The future Tactical role of Mortars

09:50 UK Mortars Update

Major Darren Szymanski, Chief Instructor, Mortar Division, Specialist Weapons School, British Army

- UK Infantry Mortar task org
- Current System Description – Weapon, Ammunition Natures, Fire Control & STA
- Discrete differences between light, mechanised & armoured battalions.
- Training
- Possible future developments

10:30 Coffee

11:00 Muzzle velocity radars for heavy mortar systems – is it necessary?

Mr Lars Krogh Vammen, Director of Business Development, Weibel

- Are muzzle velocity radars necessary on heavy mortar systems?
- Case study of the effect of muzzle velocity radars on heavy mortar systems
- Case stories

11:45 Indirect Fire in the Infantry: Current Tasks and Future Development

Capt Oliver Gawrylowicz, Heavy Infantry Development, Army Concepts and Capabilities Development Centre

- Light Effector Indirect Fire" - Ongoing Procurement of 60mm Infantry Mortar
- New tasks and threats for German Army and the effects to future capabilities of ground-based indirect fire within the Infantry

12:30 Lunch

14:00 Hirtenberger Defence Systems – THE MORTAR COMPANY

Carsten Barth, CEO, Hirtenberger Defence Systems

Developments and product solution for modern mortar systems with focus on 60mm Commando mortar system with GRAM (Grid aiming mode) and CONFRAG ammunition technology, to increase lethality of mortar rounds.

14:45 Use of Mortars in the conflict in Eastern Ukraine – Lessons Learned

Lt Col Petro Koliennikov, Senior Lecturer, Department of Artillery & Rocket Forces, Ukrainian Land Forces

- the types of mortars used
- mortar use tactics
- countermeasures to different changes of the environment

15:30 Tea/Coffee

16:00 Mortar Stream moves to Arty Stream for threat session and interactive group discussion.

17:30 - Conference Adjourns - Drinks

AGENDA DAY TWO

09:00 US Army Mortar Programmes

Lt Col Pat Farrell, Product Manager - Precision Fires & Mortars (PdM PFM), Project Manager - Combat Ammunition Systems (PM CAS), Joint Program Executive Office - Armaments & Ammunition (JPEO A&A)

- Platform integration efforts to include AMPV and JLTV
- Mortar weapon system developments
- Ammunition programs
- Fire Control Transformation

09:45 Mortar Gunnery in a threat environment

Mr Matt Terrault, Chief, Mortar Systems Branch, FCDD-ACM-MM, Picatinny Arsenal

- requirements for accuracy
- effects on automation, crew size and roles
- what additional capabilities be bought into the mortar crew mission role

10:30 – Coffee

11:00 – Italian Mortars (subject to confirmation)

11:45 – Czech 120mm Mortar Project (subject to confirmation)

Lt Col Norbert Zipaj, Project Manager, Land Forces Armament Department, Armament and Acquisition Division, Czech Republic MoD

- Why the mortar procurement programme is a long term solution
- Increased fire power and manoeuvrability: Acquisition of 62 self-propelled mortars
- Restructuring infantry brigades to manage the renewed investment in technology

12:30 Lunch

14:00 – CV90 Mortar, the last piece of the jigsaw puzzle

Mr Jonas Waltari, Head of Indirect Fires, Army Systems Division, FMV-Swedish Defence Materiel Administration

The presentation will provide the conference with an update on the Swedish 120mm self-propelled mortar including the results of the first firings.

14:45 – Polish Army RAK 120mm Self Propelled Mortar

Lt Col Piotr Kobylecki, Senior Specialist, Field Artillery Department, Land Forces Inspectorate, General Command of the Polish Armed Forces

- System Description
- Tactical employment and integration into the Artillery system

15:30 - 120mm mortar system in French Artillery

Capt Pierre CLAUDEL, Direction of Studies & Prospective Artillery, French Army

- The 120mm stream in French Artillery
- 120mm RTF1 Mortar : a battle-proven, rugged weapon system to maintain
- Future 120mm self-propelled mortar : a high-mobility, polyvalent asset.

16:15 – Chairmans washup & Finish

AGENDA

DAY ONE

0900-1030 – Keynote Address and Opening Panel

Keynote Address – Air Commodore Adam Sansom RAF, Commandant, Defence College of Technical Training

Heather Goldstraw, Head Tech School Defence Academy, UK

Representative from Technology and Innovation Office of Security of Defense Close Combat Lethality Task Force, USA

Seb Loze, Simulations Industry Manager, EPIC Games & Vice-Chair SISO Conference Committee

1030-1100 – Coffee Break and Networking

1100-1230 – Future Force Training

Colonel David Clarke, COS, RSA, UK

Wing Commander Ruari Henderson Begg, DOTC(A) Programme Manager, UK

Representative from REME, UK

Representative from USA Modeling & Simulation Group

Wim Huiskamp, TNO, Netherlands, NATO NMSG, Netherlands

1230 -1400 Lunch and Networking

1400-1530 – Training, Simulation and Education

Captain Andy Green, Royal Navy, Project Selbourne, UK

Commander Kay Hallsworth, Royal Navy

WO Sarah Cotman, 22Gp Cmd Warrant Officer, RAF, UK

Colonel Oliver Schmidt, German Air Force

1530 -1600 – Coffee Break and Networking

1600-1730 – Wargaming – Simulation Support & The Future

Chair – Dr Jill Sargent Russell

Major Jeff Guignon, Modelling and Simulation, Canadian Joint Warfare Centre (CJWC), Canada

Paul Pearce, Defence Wargaming Centre, UK

Dr John Curry, Professor, Bath Spa University, UK

17:30 – 19:30 – Networking Drinks

DAY TWO

0900-1030 – Keynote Address and Opening Panel

Representative from PEOSTRI, USA

Col David Crome, Assitant Head Learning Development and Assurance, Defence Academy, UK

Representative from Royal Marines

Mark Collins, Head TLS BD, Lockheed Martin UK

Bijal Shah, Deputy Head Joint Training & Simulation (JTS) & Defence Modelling and Simulation Coherence (DMaSC), UK

1030-1100 – Coffee Break and Networking

1100-1230 – Land Training & Education

Col James York, CTPP, UK

Representative from ARMCCN

Dr Chris Lowthorpe, Research Fellow, InGame, Abertay University

1230-1330 – Lunch and Networking

1330-1500 – Innovation

Marie Claire Isaaman, Chair, Women in Games Organisation

Col Jason Jones, NATO M&S CoE, Italy

Captain Sander Cruiming, Staff Officer M&S, Royal Netherlands Army

Representative from QM, 1 Mercian, British Army

1500-1600 – Academia, Internships and Experimentation in M&S

Jonathan Searle, Defence Academy UK

Danika Puzdrowski, DSET Intern RSA, UK

Major Ewout Van Dort, Staff Officer R&D, Royal Netherlands Army

Representative from Royal Navy HQ, UK

16:00 - Conference Finishes