

**Future Indirect Fires Conference
Bristol, 19th & 20th March 2019**

Day 1 – 19th March

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 Jon Cresswell, AH Joint Effects in Ground Manoeuvre, British Army Headquarters
Lt Col Rob Hollinrake, Mobile Fire Platform PM, Artillery Systems IPT, UK Mod

- The weapons effects required in a modern reference army
- Air defence – the new target set
- Surviving to fight in the counterfires battle
- Mobile Fires Platform project update
- Q&A

10:10 – Weapon Locating Radars in Manoeuvre Warfare.

Maj Bård Frostad (ret), Senior Military Advisor, Artillery, Saab Surveillance

- Operational view of WLR
- Saab WLR portfolio
- Future development

10:30 - Coffee

11:00 – Long Range Precision Ammunition

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

- Combat proven components
- Launcher independent
- Programmable attack
- Operational capabilities

11:20 - Evolution of Fires: Fighting with Fires in Multi-Domain Operations

COL Christopher D. Compton, Chief, Concepts Development, U.S. Army Fires Center of Excellence

- The U.S. Army in Multi-Domain Operations: an overview over the U.S. Army's new operating concept with an emphasis on application of U.S. Army and Joint fires
- U.S. Army Modernization Efforts: brief overview of current efforts to modernize the U.S. Army, including the activation of U.S. Army Futures Command, the Army's modernization strategy, and optimizing for large scale ground combat
- Modernizing Army Fires: a summary of key components of the U.S. Army Functional Concept for Fires, organizational concepts describing how we will fight with fires in 2028 and beyond, and a summary of primary efforts of the Long Range Precision Fires Cross-Functional Team (LRPF CFT)

12:05 - Mobile Sound Ranging Array, the latest insights

Alex Koers, cofounder/director of Microflown AVISA

- Acoustic Multi Mission Sensors as the technology elevator
- Target acquisition, fire control and predicting impact
- Ground vehicle based approach in the Netherlands (Boxer, Fennek)
- Multi copter and fixed wing platform enrichments

12:30 – Lunch

14:00 – A paradigm shift in targeting and navigation introducing P3DR, precision 3D registration, into the equation

Tommy Hultin, Business Development Director, VRICON

14:30 – Future Operational Environment 2050 and the Next Generation Artillery System

Major (Retd) Dwayne Hynes, Deputy Chief of Staff, G2, US Army

- The likely future operating environment and its near and longer term fire support implications
- Why we must prepare to operate in a full range of complex environments and prepare for a wide spectrum of threats, challenges and contingencies.

15:00 – Mobile Artillery Systems

Major General, retired, Mark McDonald, Senior Consultant, AM General

- The need for lightweight, extremely mobile Artillery
- Provides excellent survivability
- Breakthrough soft recoil technology
- Increased lethality

15:30 – Tea/Coffee

16:00 – Artillery Confrontation in Eastern Ukraine

Major-General Andrii Koliennikov, Deputy Director, Central Scientific Research Institute of the Armament and Military Equipment Directorate, Armed Forces of Ukraine and co-authored by Professor Sergii Lapitsky, National University of Defence 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 – The Best Way to Achieve Artillery Interoperability: lessons learned from the conflict in Donbass

Professor Yuri Repilo, Doctor of military Sciences, National University of Defense of Ukraine.

To achieve artillery interoperability you can change the national elements in different variants. These include:

- Adaptation– nothing change now but at real battle or operations they can do it according to real circumstances;
- Revolution – completely change all national elements according to contemporary standards;
- Evolution - gradually change all or some national elements according to standards.

The presentation will examine pros and cons with a view to lessons learned from the conflict in the Donbass.

17:00 – 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

Day 2 – 20th March

09:00 – Artillery Systems Cooperation Activity (ASCA) Official Brief

Major Chris Molyneaux RA, Artillery Systems IPT, UK ASCA OSC Member

The endorsed ASCA brief from the interoperability program covering capabilities, membership, recent successes and future activity.

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

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 probability of hit with different rocket payloads including bomblet, sensor fused munitions, terminally guided munitions.
- The purpose of the study is to inform the debate over cheap non discriminating sub-munitions to expensive highly discriminating sub-munitions with a range in between and provide evidence to support capability requirements.

10:00 - Artillery Mission Training System

Lt Col (Retd) Alastair Parkinson, Cubic Defence UK

- Safety case considerations;
- Value for Money;
- Existing platforms in Collective Training;
- Training as a system of systems;
- The logistics-platform-C2-FO relationship.

10:30 – Coffee

11:00 – Development of the Italian Artillery

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

The presentation will discuss the update process of the Italian Army MLRS system.

11:30 – Current challenges for artillery procurement.

Colonel (Retd) Olivier Fort, Nexter Systems

- Munitions: area effects, precision, range.
- Gun platforms: Numbers, protection, logistic autonomy

12:00 – The Danish 155mm project - CAESAR 8x8

Major Mike Johnsson, S7/1 Danish Artillery Battalion

- An introduction to the new weapons.
- Digitalization of the fire support.
- Ammunition present and future.

12:30 - Lunch

14:00 – Panel Discussion – Capability Development Trends

Developing the day one panel regarding the threat environment the panel will discuss capability requirements to defeat enemy threats in target location, A2AD, EW, and direction finding.

Coalition Forces have enjoyed technological superiority during the Global War on Terror but this will not be so in future conflicts. Future surface to surface fires units must be capable to operate in GPS denied environments, maintain freedom of action against adversaries with robust A2AD capability, and win the EW battle by denying the enemy the ability to accurately locate firing units by reducing their electronic signatures. Most importantly indirect fires systems and their associated C4I and ISTAR assets must be incorporated in the training and doctrine that underpins them and must be interoperable with coalition forces.

14:45 – U.S. Marine Artillery

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

- Overview of Marine Artillery
- Marine Corps Artillery Programs
- Marine Corps Indirect Fire Future Initiatives

15:15 - Upgrading German Artillery and Target Acquisition

Major Dominik Nessler, Teamleader Tactical Suitability Testing & DEU JFO National Program Manager, Army Concepts and Capabilities Development Centre - Arty/JFS Branch , German Army

- Fire Capabilities and Ammunition
- Target Acquisition
- DEU Future Indirect Fire System
- Command & Control (Digitalization) Arty/JFS

15:45 – US Army Precision Guided Munitions Modernization

Major Matt Bender, Assistant Product Manager for Product Manager - Precision Fires & Mortars (PdM PFM), Project Manager - Combat Ammunition Systems (PM CAS), Joint Program Executive Office - Armaments & Ammunition (JPEO A&A)

The presentation will provide an overview of the PM CAS portfolio on current and development efforts to deliver conventional and precision leap-ahead munitions combat power to Warfighters, giving them the materiel edge over potential adversaries.

- Proven effectiveness and successful employment of the Excalibur 155mm artillery projectile and the Precision Guidance Kit (PGK) in both training and armed conflict has led the US Army to modernize both to increase the capability of these proven precision guided munitions.
- Strengthening partnerships and Alliances; Foreign System Qualification Process; Insensitive munitions program

16:15 – Chairman’s wash up Conference Closes