

**[Squad:](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/SitePages/Home.aspx)**

**[Foundation of the Decisive Force](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/SitePages/Home.aspx)**

**[December 2013](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/SitePages/Home.aspx)**

***[Update](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/SitePages/Home.aspx)***

**14 January 2014**

**This update includes highlights on:**

* **Highlights on Squad Gap Mitigation from SFDF Dismounted Non-Network Enabled Limited Objective Experiment (DNNE-LOE) report**
* **SFDF-Maneuver, Fires Integration Exercise (MFIX)**
* **Upcoming Events**

**Highlights: Squad Gap Mitigation from SFDF-DNNE-LOE**

* **Summary of Findings.** All 13 technologies contributed toward improving squad overmatch; however, six of the 13 had more impact on squad effectiveness. The impact depended on numerous variables: mission profile, terrain, threat, and employment Tactics, Techniques and Procedures (TTPs). Regardless of the improvement in overmatch, when the enemy decided the time and location of contact, the technologies did not prevent the squad from being surprised and losing the initiative. Some technologies affected more than one gap. There were six Squad Gaps and 14 Small Arms Gaps assessed. Linked are the[ Executive Summary](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/All%20Documents%201/SFDF_Dismounted%20Non-Network%20Enabled%20%28DNNE%29_Limited%20Objective%20Experiment%20%28LOE%29_EXSUM_4%20Dec%202013.pdf) and[ Final Report](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/All%20Documents%201/SFDF_Dismounted%20Non-Network%20Enabled%20%28DNNE%29_Limited%20Objective%20Experiment%20%28LOE%29_%20Final%20Report_4%20Dec%202013.pdf).
	+ ***Squad Required Capability 1 - Fire, Maneuver, and Survive in Close Combat:*** Thirty of the 37 Soldiers agreed that the squad’s lethality increased when employing the experimental case technologies. All three squads had an overall increase in lethality during short-range engagements from five to 98 meters. The squads employing the experimental case technologies improved in speed of engagement, quality of hit (shot placement) and demonstrated a 10% to 23% improvement over the base case squad. Their effectiveness during long-range engagements from 190 to 600 meters improved significantly. The three squads equipped with the experimental case technologies engaged the threat 4% to 24% faster and had 27% to 58% more hits.
		- **Squad Gap 1a.02:** During mission operations Squads lacks the capability to develop the situation out of contact, under constrained ROEs, to allow the Squads to set the conditions in advance of threat actions.
			* **Pen Flare Contribution** had limited mitigation and was not as effective in signaling as the legacy flare, except when fired directly at unit to be signaled.
			* **Man Portable Line Charge (MPLC)** did not mitigate gap. Increased weight, time to emplace, and requirement to clear the lane after deployment did not mitigate the gap.
			* **XM 210 Lightweight Dismounted IR Hand Held Signal** had a positive impact on gap; only beneficial when enemy personnel have degraded or zero night vision capability.
		- **Squad Gap 1a.03:** Squads lacks the capability to conduct unconstrained dismounted movement for extended periods, and integrate capabilities with loads not exceeding 30% of Soldier’s weight.
			* **LSAT** contributes to mitigation of Gap 1a.03 by reducing weight of weapon and ammunition, and improved Squad effectiveness. Operationally, the Lightweight Small Arms Technology Case Telescoped Lightweight Machine Gun (LSAT CT LMG) was able to contribute to a reduction in the Soldier’s load by reducing the weight of both the weapon (25.6 lbs less) and ammunition (15.2 lbs less) contributing to the mitigation of Squad Gap 1a.03. LSAT also mitigates *Small Arms Gaps #7 and #8*. LSAT needs improvements to mitigate *Small Arms Gaps #24 and #25*.
			* **Man Portable Line Charge (MPLC)** did not mitigate Gap. (same as above)
			* **Individual Assault Munition (IAM)**, Soldiers assessed concept of the IAM as there was no prototype available. 80% of the Soldiers felt the IAM would provide more operational advantages over the current shoulder launched munitions.There is Soldier concern regarding increased risk of selecting the wrong type munition for the target profile. Soldiers felt the system should have the capability to stand down if not employed. The IAM is aligned to *Small Arms Gaps #21 and #22.*A prototype was not available and could not assess mitigation of Soldier’s load or ability to conduct ballistic and single shot rapid against the Gaps.
			* **Universal Battery Charger (UBC) [also affects Squad Gap 9.02]** adds to Soldier load, negatively impacts value to Squad. Soldiers and Leaders felt that UBC Basis of Issue (BOI) was more than required and unnecessarily increased Soldiers’ load (1 per Squad/1 per platoon HQ).
		- **Squad Gap 1.01:** Squads have limited capability of pre‐emptive protection and situational awareness to identify applicable threats to achieve the advantage of surprise against the threat in austere environment.
			* **Instant Eye MK-2** enabled the Squad and platoon to gain situational awareness (Squad Gap 1.01) and establish an operational picture (Squad Gap 4.02).
	+ ***Squad Required Capability 2 – Employ lethal and nonlethal capabilities coupled with sensors to effectively engage targets at extended range:***
	+ **Squad Gap 3.01:** Squads lacks the capability to access, coordinate, and integrate external/ joint enablers at ranges outside small arms range in austere environments.
		- **Mobile Handheld Fires Application (MHFA):** MHFA provided the Squad the capability to obtain a CAT 1 grid to support precision fires. This capability allows the Squad to develop **the situation out of contact and retain the freedom of maneuver.**
	+ ***Squad Required Capability 5 – Fight for information to contribute to situational awareness.***
	+ **Squad Gap 4.02:** Squads have limited capability to manage a clear operational picture in order to maximize resources by conducting precision movements to execute shaping and tactical fires. The inability to send threat information is a common occurrence and severely degrades mission success.
		- **Instant Eye MK-2** enabled the Squad and platoon to gain situational awareness (Squad Gap 1.01) and establish an operational picture (Squad Gap 1.01).
* ***Squad Required Capability #7: Generate Power.***
	+ **Squad Gap 9.02:** Squads lack the capability while operating as dispersed and decentralized force to generate, recharge, detach, and swap power sources to maintain operational requirements up to 72 hours.
		- **Universal Battery Charger (UBC)** provided capability for power generation to support Squads operating independently or as part of a PLT to conduct self sustained operations for up to 72 hours. UBC could provide power generation to support static locations.
		- **Solar Panel:** requires direct sunlight and ideal weather conditions to charge efficiently, increasing potential for compromise. Squad/PLT patrol bases maximize cover and concealment.
		- **Basis of Issue (BOI):** Unnecessarily increased Soldiers’ load (affects Squad Gap 1a.03).

**SFDF - Maneuver, Fires Integration Exercise (MFIX)**

**SFDF is collaborating with Fires Center of Excellence (FCoE) to conduct the MFIX that will focus on Counter-Unmanned Aerial Systems (C-UAS), Fires, Situational Awareness, Protection and Power (energy). Phase 1 will take place at Fort Sill in May-Jun 2014 and Phase 2 at Fort Benning, Aug-Sep 2014.**

* **Twelve (12) Solutions Selected to Participate in the FY 2014 SFDF-MFIX:** TCM-Soldier-Deputy, TCM-Soldier CSM and the SFDF Team held a solution selection board for 37 nominated solutions for participation in the SFDF-MFIX Fiscal Year (FY) 2014. Provided are links to the [Quad Charts](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/All%20Documents%201/MFIX%20Quad%20Charts_Approved%20Solutions%20SFDF-MFIX%20Participation_FINAL_%28Last%20Updated%20%2020131220%29.pptx), approved solutions [Memorandum for Record](https://portal.tradoc.army.mil/sites/mcoe/cdid/cdid_/MBL/SFDF/All%20Documents%201/MEMO%20FOR%20RECORD_Approved%20Solutions%20for%20SFDF-MFIX%20Participation_%E2%80%8CFINAL_%2820131220%29.pdf) and prioritized list of solutions. The Memorandum for Record identifies the selection requirements for participation in the MFIX.
* **Prioritized Capability List of MFIX Solutions:** The list below is the SFDF-MFIX prioritized list of capabilities. The capabilities are rank ordered one to eight, whereas a capability with the rank of one is the highest, and a capability with the rank of eight, is the lowest priority. The non-materiel Soldier System & Integration solution will be assessed throughout the exercise, encompassing all solutions listed on the prioritized list. Ranking order:
	1. Lethal Miniature Aerial Munition System (LMAMS).
	2. Mobile Handheld Fire’s Application (MHFA).
		+ Integrated Soldier Power/Data System (ISPDS).
		+ Conformal Battery.
		+ Storm SLX.
	3. Soldier Protective System (SPS).
	4. Squad Power Manager (SPM).
	5. Enhanced Modular Universal Battery Charger (EMUBC).
	6. Gore Multispectral Signature Management.
	7. 1K Flex Fuel Generator.
	8. Machinegun Accessory Bag (MAG-Bag).

**Upcoming Events**

* ***13-16 Jan Army Co-Create:*** taking place at Mabry Hall.
* ***14-16 Jan, SFDF-MFIX Action Officer Working Group (AOWG), Ft Sill, OK.***
* ***22-23 Jan, Joint Collaboration:*** the SFDF team will attend the USMC, Marine Expeditionary Rifle Squad (MERS) CBA Review. Intent is to have joint collaboration and provide Army perspective on SFDF, trends and insights on capabilities.
* **31 Jan, DNNE Brief to Program Executive Office Soldier (PEO-S), BG Ostrowski.**
* **United States Military Academy:** moving to conduct simulation experimentation to develop quantitative gap analysis based on DNNE findings.

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