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Operation Iraqi Freedom PEO Soldier Lessons Learned

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15 May 2003

Introduction

The following is a gathering of lessons learned on items of equipment either within the PEO Soldier domain or closely related to current or planned PEO programs. I gathered these lessons while serving as the PEO Soldier Liaison to the ASA(ALT)-SWA Operations Cell. I accompanied a team from the Science and Technology community conducting a similar mission for GEN Kern, Commander, AMC, and MG Doesburg, Commander, RDECOM, consisting of Mr. Bill Andrews, MAJ Rob Johnston and SFC Sam Newland.

The lessons were gathered from 5 through 10 May 2003 from soldiers serving in the Baghdad sector during Operation Iraqi Freedom. Comments came from Brigade Commanders down to riflemen. The following units were interviewed:

- HHC/1-187 IN, 101st ABN (5 MAY)
- 2d BCT, 82d ABN (6-7 and 10 MAY)
 - 3-325 PIR (7 MAY)
 - 2-325 PIR (7 MAY)
 - 3-7 CAV (8 MAY)
 - FSB (8 MAY)
- 1st BCT, 3 ID (9 MAY)
 - 3-69 AR (9 MAY)

We informed brigade headquarters and requested permission to conduct interviews at the company level. The brigade issued a FRAGO to subordinate units and arranged link up times. Once we arrived in company areas of operations we would gather available soldiers, typically 7 to 10, and conduct interviews for approximately 90 minutes.

An effort was made to capture observations from soldiers with a wide variety of MOS's and experiences. We questioned airborne, air assault and mechanized infantrymen, armored

soldiers from both armored battalions and cavalry squadrons, and clerks, mechanics, and medical personnel in the support battalion.



*Soldiers from the 2d BCT, 82d ABN FSB,
Baghdad, Iraq*

The timing was very fortuitous. In almost all cases, we were the first external visitors to the unit. Soldiers were fresh off combat operations and were just beginning the stability and support phase of the operation. They were very interested in relating their experiences and thoughts on how equipment could be improved. They recognized that the equipment provided significant combat overmatch against the combatants they encountered enroute to and in Baghdad. However, all soldiers know there is always room for improvement. In this spirit, this document will capture their feelings on what worked well and what can be improved as well as their ideas on how the deficiencies can be corrected.

Covering every item of equipment in the PEO Soldier inventory is a daunting task. I do not claim to be a subject matter expert on each item. I have recorded the soldier's comments as accurately as possible. It may be that a subject matter expert could have addressed their concerns on the spot or thought of additional

questions that would get closer to the heart of the issue. I was unable to do so and the respective PM's are encouraged to conduct the follow-up work required to address these observations if necessary.

Lethality

9mm: There was general dissatisfaction with this weapon. First and foremost, soldiers do not feel it possesses sufficient stopping power. They desire a modification to allow for more accurate firing during limited visibility – tritium on the sight posts was a specific recommendation. The 9mm magazine performed very poorly. Soldiers were stretching the spring in order to provide sufficient force to feed rounds into the chamber. Soldiers were not satisfied with the guidance from higher to not stretch the spring and only load 10 rounds in the 15 round magazine.



9mm magazine with insufficient spring force

The issued 9mm holster is not used. Most soldiers/units purchased thigh holsters because of comfort, access and availability. If the 9mm is your personal weapon, you don't want to have to always wear your LBV in order to have your weapon with you. The leather shoulder holsters did not hold up well in this environment. The thigh holsters came from a number of different commercial sources such as Blackhawk.



Issue 9mm holster mounted on OTV and commercial thigh holster

M4: Soldiers were very satisfied with this weapon. It performed well in a demanding environment especially given the rail system and accompanying sensors and optics. As one Brigade Commander said "The M4 with PEQ and PAC provided overmatch over our threat equipped with AK47s and RPGs." The general consensus is that every rifleman wants the M4 vice the M16A2.

The most significant negative comment was reference the M4's range. In the desert, there were times were soldiers needed to assault a building that may be 500 + meters distant across open terrain. They did not feel the M4 provided effective fire at that range. The 82d Airborne soldiers wished they had deployed with M14's at the squad level as the 101st did.

There is also a significant safety issue that bears further investigation. Apparently when the M4 selector is in the "Safe" position and the bolt is allowed to ride forward, the firing pin still makes contact with the bullet primer. A CSM in the 101st related a story of a soldier who had an accidental discharge while his weapon was in the safe position – the CSM personally witnessed this incident. Numerous soldiers showed us bullets in their magazines that had small dents in the primer. There may be a "Safety of Use" message out on this issue but it is not well known at the battalion-and-below level.

The flip-up sight on the M4 allowed the soldier to engage targets out to 600 meters. However, the plastic grommet that formed the small aperture was prone to falling out. Soldiers "super-glued" the aperture to the sight.

M203: Again, very positive comments on this weapon. Many soldiers felt this was the weapon of choice for combat. Unfortunately, we are not able to realize the benefits of this capability in training. Soldiers did feel, however, that the safety is too unreliable to carry a round in the chamber. Some mentioned the need for a buckshot-type round.

M249 SAW: Overall positive comments on this weapon. It provided the requisite firepower at the squad level as intended. The short barrel and forward pistol grip allowed for very effective use of the SAW in urban terrain. Soldiers requested a better stowage position for the bipod legs. The legs interfered with the attachment of the forward pistol grip. If a pistol grip was attached and the legs were down, the legs made movement in the restrictive urban terrain difficult. Additionally, the soft ammo pouches are great improvements over the plastic ammo canister. However, the 100-round pouch performed much better than the 200-round pouch. There is a design flaw that allows the ammo to get tangled in the 200-round pouch.

M240B: Soldiers have great confidence in this weapon. Again, the vast majority of comments were positive. Most negative comments were relative to the AG's load. Soldiers recommended fabricating the tripod out of a lighter material. The AG bag is not integrated into the remainder of the MOLLE and, therefore, is not easily carried. Additionally, the nylon bag melts when it comes in contact with a hot barrel. Other suggestions included adding collapsible bipod legs like the SAW, wiring down the heat shields and an ammunition carrying system to carry 300-400 linked rounds.

Shotgun: This was a very useful addition to the MTOE. The shotguns were used mainly as ballistic breachers. Therefore, soldiers felt the length could be greatly shortened. They removed the stock and local purchased pistol grips and would have preferred a "sawed-off" configuration.

XM107: The Barrett 50 cal Sniper Rifle may have been the most useful piece of equipment for the urban fight – especially for our light fighter. The XM107 was used to engage both vehicular and personnel targets out to 1400 meters. Soldiers not only appreciated the range

and accuracy but also the target effect. Leaders and scouts viewed the effect of the 50 cal round as a combat multiplier due to the psychological impact on other combatants that viewed the destruction of the target.

My spotter positively identified a target at 1400 meters carrying an RPG on a water tower. I engaged the target. The top half of the torso fell forward out of the tower and the lower portion remained in the tower."
325th PIR Snipe

There were other personal anecdotes of one round destroying two targets and another of the target "disintegrating."

The most pervasive negative comment was that snipers felt the Leopold Sight was inadequate for the weapon – that it was not ballistically matched. If the sight was zeroed for 500, 1000 and 1500 meters, soldiers did not feel confident in their ability to engage targets at the "between" distances (e.g. 1300 m). Snipers felt there were better sights available for this weapon such as the Swarovski.

Sniper team spotters felt the tripod for the Leopold Spotter Scope could be better designed.

COL Bray, Commander, 2d BCT, 82d Airborne Division supported an Operational Needs Statement for a Sniper Sight that would allow the sniper to identify targets as combatants or non-combatants out to 2000m.

M2: The M2 50 cal still receives great praise. It performed exceptionally well in this harsh environment. Soldiers did mention that the vehicular mount had too much play for accurate fire and that the large ammo box made it difficult to effectively manipulate the weapon.

Close Combat Optic: Soldiers appreciate this equipment also. Many commented that the new design/battery was a vast improvement over the previous CCO. Negative comments were on the honeycomb attachment which was difficult to clean and its ability to hold a zero.

A suggested design change was to fix the CCO about its axis within the half-moon spacer. Currently the CCO can rotate within the mount. This does not effect the accuracy of the sight but, if the CCO is not oriented properly when the

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soldier zeroes, his left-right and up-down adjustments will be on a cant. A simple tongue and groove design modification would fix the CCO from rotating.

Bore sighting the weapon's sensors and optics has been fully accepted. We heard anecdotal evidence of soldiers hitting 40/40 day and 32/40 at night with optics in training. Soldiers are purchasing Bullet Boresights from AccuSite. The borelight fits in the chamber of the weapon. This eliminates the steps required to boresight the borelight to the weapon.

ACOG: Many soldiers expressed a preference for the ACOG over the CCO because of its magnification and no need for batteries.

MGO: Soldiers were satisfied with the performance of the MGO on SAWs and M240Bs.

PAC4/PEQ2/PEQ6: Again, this equipment provided a significant advantage at night. A brigade commander commented that the enemy never seemed to grasp that we could see and hit them at night. The covers on the PAC4 are prone to fall off. Pressure switches were a common point of failure. The zero rails on the PEQ2 come unglued too easily. Some soldiers used the PEQ6 on their M4 because of the white-light capability. However, they felt the PEQ6 consumed batteries too quickly and was too easy to accidentally turn on. On the plus side, the visible red dot was effective at getting the attention of a person that was acting too aggressively.

Many soldiers purchased the SureFire Tactical Light and were very complimentary of its design and durability. The only problem with this light is that the IR cover falls off too easily. I received comments such as "our equipment should be as rugged."



82d M4 with SureFire Tactical Light

Vehicle crewman purchased hand-held laser pointers to orient the fire of more than one platform weapon.

Lubricant: Soldiers provided consistent comments that CLP was not a good choice for weapon's maintenance in this environment. The sand is as fine as talcum powder here. The CLP attracted the sand to the weapon. Soldiers considered a product called MiliTec to be a much better solution for lubricating individual and crew-served weapons.

Survivability

Interceptor Body Armor: Soldiers have great confidence in their body armor. As one battalion commander stated "soldiers felt comfortable 'trolling for contact' because they felt their body armor provided sufficient protection." There were numerous comments about comfort and weight but, in general, comments were positive.

The comfort comments dealt mainly with maneuverability. Soldiers indicated that it was difficult to maintain a good prone firing position while wearing the IBA with plates. Their Kevlar interfered with the back of the vest and it was difficult to keep your head up while prone. Also, the plates made it difficult to seat the stock of the weapon into the shoulder as soldiers are trained. The foam impact pad in the airborne soldier's Kevlar further exacerbated the problem of contact between Kevlar and vest.

Most importantly however, is the performance demonstrated by the IBA during the operation. There were numerous examples of impacts that could have been fatal that resulted in minor or no injury to the soldier.

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The A/3-69 AR XO's tank responded to a threat to the field trains of about 60 dismounted enemy. While engaging the enemy with the 7.62 MG, the loader felt an impact to his chest that knocked him back into the turret. He told the XO he had been hit. The XO checked him for a wound, found none and directed him to continue to engage the enemy. After the fight they found the entry hole to the IBA, significant damage to the edge of the SAPI plate and a 7.62 round embedded in the protective liner of the OTV.



7.62 round glanced edge of SAPI and embedded in OTV

Other soldiers in A/3-69 AR made fun of the loader above because he wore an IBA inside the turret of an M1 until he was hit in the chest and survived. Vehicle crewman expressed a desire for similar protection. Some of the soldiers we interviewed said IBA was suitable for the turret. Others said it was not. Due to the nature of the threat, M1 and M2 crews spent a significant amount of time exposed in the hatches, engaging dismounted enemy around their vehicles, as they pushed through. Vehicle crewmen took it upon themselves to modify their issued Spall Vest to increase the protection. One crewman in 3-7 CAV took the protective pads from three different spall vests and put them into one. The soldiers in 3-69 AR found they could put IBA SAPI plates into the spall vest.



Soldier-modified Spall Vest with 3X protection (6 layers)

JSLIST: The vast majority of comments reference this piece of equipment were positive. As one brigade commander stated "Unbelievable. I don't like wearing MOPP, but this one is OK." Soldier felt JSLIST was a vast improvement over its predecessor. The negative comments were that most received the woodland green suit and, for the crewmen, the material is not flame retardant which forces them to wear JSLIST and NOMEX – which is not ideal in this heat. They felt the suspenders were poor quality and made defecating in the field very difficult.

Combat Identification: Commanders expressed a need for thermal and IR recognition features for the uniform. The "bat wing" configuration for the helmet worked well because it was less prone to fall off. All soldiers had a small patch of Velcro on their left sleeve for glint tape – we should consider adding this feature to future combat uniforms. Another suggestion was to embed the recognition tape into the fabric of the helmet cover and uniform sleeve.

Aid Bag/Combat Lifesaver Bag: Soldiers were dissatisfied with how the aid bag mounts to the ruck. They felt it made for too wide of a profile in the back to front dimension especially when exiting an aircraft during airborne operations. The CLS bag is not currently attached to the ruck externally. Soldiers expressed a desire that the CLS bag be larger and attach externally. The Dixie splint in the aid bag was deemed too fragile.

Eye Protection: In general, soldiers were very appreciative of the WileyX sun glasses.

Comments were almost all positive. However, many soldiers said they fog easily when you are sweating and the lenses scratch. ESS goggles were a vast improvement over WSD goggles but it is still uncomfortable to wear prescription glasses beneath the goggles.

Helmet: Comments on the current Kevlar were few because most soldiers were aware of the ACH although none had been issued yet. In general, the expectation was that the ACH would be more comfortable.

Situational Awareness

AN/PVS-14: We received mainly positive comments about these NVGs for units that had them. In general, soldiers agree that they are a vast improvement both in terms of comfort and performance over the PVS-7 variants. The negative comments revolved around the helmet mount and the battery compartment. The swing arm and the detent button on the mount were frequent points of failure. Soldiers recommended constructing these components of a sturdier material. The battery compartment cover fails frequently and requires the entire sight to be turned in. Soldiers recommended a separate battery case possibly to reduce the cost of repair.



Damaged Battery Case on PVS-14

AN/PAS-13: Feedback on the medium thermal weapon sight varied greatly depending on whether the feedback came from the mechanized or light communities. The mechanized elements had all positive comments. They felt the clarity of the TWS outperformed the M2A2 sight in most cases. However, the light soldiers felt the TWS was too fragile and heavy for offensive operations. They would use for defensive operations. Other concerns were the availability of the TWS battery and how quickly it consumed batteries.

Also, the sight blurs when you move it. Soldiers recommended a tripod for observation.

The Rapid Equipping Force provided a hand-held thermal viewer, the Raytheon X1, to the 101st. The 82d was aware and expressed a desire for a hand-held thermal viewer also.

Commercial GPS: As is widely known, many soldiers purchase their own GPS systems rather than use the PLGR. The Rhino was provided to the 82d as part of the rapid fielding initiative. Overall, soldiers were very appreciative of this addition to their MTOE. The Rhino was a vast improvement over the PLGR because of the weight, volume, power consumption and performance – the Rhino consistently acquired satellites faster than the PLGR. However, the soldiers stated they did not use the communications capabilities of the Rhino, at least not extensively, because it was not secure and consumed batteries too quickly in this mode.

Squad Communications: Based on the feedback, I believe this is the area that requires the greatest attention by the Acquisition community. Soldiers have no confidence in the ICOM radios. The range was unsatisfactory. Everyone had a Motorola-type hand-held radio that had vastly better range and power performance. Soldiers purchased handsets and longer antennas for their ICOM radios.

Whether mechanized or light, communications at the squad level is problematic. Mechanized leaders told us they needed a way for squads to communicate back to the platforms and with each other once they dismounted. Light leaders had the same concern with communicating with geographically separated squads operating independently in urban terrain. Soldiers had MBITR radios at company and platoon level. They feel the MBITR is a good solution for the squad but could be lighter/smaller.

Commander's Digital Assistant: Leaders agree there is a need for this type of device in the light infantry formation. The laptop variant of the CDA was very well received. However, the PDA variant was less so. The problems with this variant were mainly a function of timing. Soldiers at the company and below level were very busy with activities associated with combat operations and had less time to learn the interface than their peers on battalion and higher

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staff. They also felt the PDA variant was too slow and consumed batteries too quickly.

In comparison, the mounted platforms received Blue Force Tracking for the operation. BFT was extremely successful and receives a good deal of credit for the success of the operation. Commanders indicated they needed something as easy to use and as reliable as BFT for the dismounted soldier.

COL Bray, Commander, 2d BCT, 82d Airborne division initiated staffing of two Operational Needs Statements for devices that would improve situational awareness. The first was for an acoustic through-wall sensor that would allow soldiers to detect noises within a building from up to 300 meters away. The second was for an I2 device integrated with the helmet. The intent was to have the device distributed across the helmet such that the center of gravity of the combination is coincident with the center of gravity of the helmet thereby improving the comfort of the wearer. His exact words were optics in front, circuitry on top and batteries in back.

Mobility

Boots: Soldiers were generally dissatisfied with the performance of the Desert Combat Boot. The soles were too soft and were easily damaged by the terrain. This seemed to be more of a problem for the boots manufactured by Altima. Many spent their own money to have the boots resoled with Vibran soles with mixed success.



Damaged sole of Desert Combat Boot

Soldiers felt the boots held moisture too readily and would have benefited from ventilation holes such as the jungle boot possesses. There were several complaints that the boot cut into the top of the foot and many soldiers did not use the bottom set of lace holes to reduce the pressure

on the top of their feet. Soldiers felt the sizing of the boots was inconsistent.

Soldiers found the Belleville boots to be very comfortable but too hot for this environment. The Marine Corps Desert Boot has a very good reputation.

Knee/Elbow Pads: For the most part, soldiers thought the “turtle shell” pads provided were great. However, many felt they were too stiff and cut off circulation. They claimed there were better designs available on the market such as the HellStorm variant that were flexible such that they were more comfortable but still provided the requisite protection. We received several suggestions to build the joint protection into the uniform.

Assault Ladder/Battering Ram/Quicky Saw: These items did not get much use because they were too heavy and bulky for the hasty attack/movement to contact type operations the units conducted. Soldiers stated they would have used the quicky saw if they had received the mission to conduct a deliberate attack such as an airfield seizure. They gained confidence in the saw during training but did not have a need for it during the operation.

On the other hand, they damaged two assault ladders during training and did not feel this equipment was very useful or well-designed.

Again, the battering ram was deemed too heavy for the missions conducted. As one soldier stated “a battering ram may be suitable for a SWAT team that has to clear one or two rooms but we clear multiple rooms in multiple buildings.”

Battle Ax/Bolt Cutters/C4/Explosive Tape: These were the preferred breaching tools. Soldiers had many positive comments about the battle ax. Bolt cutters were also very useful because many gates and doors were padlocked.

M-Gator: Soldiers are very appreciative of this asset. They believe the vehicle could benefit from greater power and the ability to tow a trailer. They would like to be able to mount a crew-served weapon for personal protection. The 82d has 5 per battalion and they are maintained at the company level by the mortar section. The 101st maintains the vehicles at battalion level.

Slings: Soldiers are purchasing their own slings because the issued variant does not provide the flexibility or comfort they require. Soldier purchased or fabricated tactical slings for the M4/M203 that allowed the weapon to be slung on their back or hung on their chest so they could respond to contact faster.



Tactical sling preferred by soldiers

Sustainability

Desert Camouflage Uniform: The most prevalent comment on the DCU was the need for pockets on the sleeves. Soldiers realize they will wear IBA in almost all environments from now on. The pockets on the front of the DCU are all but useless. Many soldiers have already had a tailor sew pockets on their sleeves. A similar suggestion was made for the pant pockets. The current pockets are frequently blocked by the protective mask carrier and the thigh holster. Soldiers suggested moving the pants pockets to the front of the leg.

The durability of the uniform was questioned due to the propensity of the thread to give away especially in the crotch area. Soldiers felt that dirt was to blame for the high failure rate. Soldiers did not receive an opportunity to have their uniforms laundered for over 30 days of combat. When they did get the opportunity, many refused it because of the perceived likelihood that their uniforms would be lost. Interestingly, we heard a request for a hand-powered platoon or company level washing machine (e.g. a wash board) from several different soldiers and units.

Soldiers also thought the collar was too wide. When we asked why this was a problem, the

soldiers responded that they felt the collar did not present a neat/aesthetic appearance.

T-shirts: Soldiers are purchasing coolmax-type t-shirts because of the wicking properties. The shirts keep the skin dry thereby keeping the soldier warmer when it's cold and cooler when it's warm. Under Armour is a popular brand. The soldiers are also knowledgeable about silk weight underwear.

Socks: A very important item of equipment that generated a good deal of discussion especially among the lightfighters. Many received the black wool/poly pro blend which were too hot for this environment. Some received the Wright sock (tan outside/white inside), which shrunk too much after washing. Soldiers within 3ID had received the dark green sock that was selected and continued to judge it as superior. Again, soldiers felt if they could just keep their socks clean they could better protect their feet.

Belt: As soldiers begin to hang additional equipment from their waist, they need a more robust belt. The belt of choice is a heavy nylon web belt with Velcro fastening and an extraction loop such as Blackhawk's CQB Riggers Rescue Belt.

Gloves: The nomex gloves provided with the rapid fielding initiative were too thick and warm for this environment. Soldiers preferred the air crewmen or mechanic style nomex. Other popular gloves include moto-cross or batting style gloves. Some soldiers purchased HellStorm gloves from Blackhawk.

Camelback: Everyone agrees that the camelback-type hydration system is the way to go. Soldiers stopped even using their 1 qt canteens once the NBC threat subsided. However, the camelback variant that we distributed to the 82d was not rugged enough. The most common comment was that bladders ruptured easily with no way to exchange them. Soldiers' personal experience with camelbacks they've purchased is much better. It seems either we purchased a lower quality version or we received a bad lot. Camelback also offers an NBC variant now that should be considered for future purchases.



Camelback bladders ruptured

MOLLE: Overall, the soldiers appreciate the design and intent of the MOLLE system and view it as a vast improvement over its predecessors. In general, soldiers are attaching pouches directly to the IBA and not using the FLC. The exception to this rule is with the M203 and SAW gunners. If these soldiers are taken out of action for some reason, it is not reasonable to transfer their ammunition to another soldier given the different sizes of the IBAs. In order to keep the key weapons systems manned, the vest is transferred to another soldier. Soldiers asked that the surface of the IBA have as many loops as possible. They even said an x-large IBA should have more loops than a small to take advantage of the greater surface area.

According to the soldiers the strengths of the MOLLE system are its flexibility, the sustainment pouches, the repair kit and, in general, the comfort.

The soldiers identified several areas for improvement. First, there is general dislike of snaps. They thought Velcro in combination with fast tech-type connectors were better. There is also a connector by a commercial company, Tactical Tailor that soldiers preferred. The 82d did not bring the MOLLE ruck because they have not certified it for airborne operations yet. Soldiers noted that the straps on the Alice ruck, when worn in combination with the IBA, tended to ride out on their shoulders and cut off the circulation to their arms.



Soldier modified load carriage

The MOLLE grenade pouch only accommodates frag grenades. Flash-bang grenades and smoke grenades will not fit. There is also not a pouch for their PVS-14s. They use the corpsman pouch, SAW pouch or MBITR pouch for their NVGs.

The assault ruck received many positive comments but many soldiers found it too small and insufficiently durable. They were attempting to carry 60 pounds in the assault ruck. To cope with this they either added sustainment pouches and butt packs to their assault pack or purchased commercial rucks. I personally saw a very large number of Blackhawk black rucksacks used by RTOs and others in lieu of the assault ruck. The message I received was that the need for a sturdy, stand-alone ruck for the assault outweighed the need for a modular component of the MOLLE system.

Interestingly, we received no comments on the fact that the MOLLE was woodland green and many soldiers did not have the desert camouflage covers. I assume the paucity of comment was due to the lack of a need for stealth for this operation. However, we need to continue to pursue a common camouflage pattern or field sufficient quantities of camouflage covers.

Neck Gator: Many light soldiers told us that this was the single best piece of gear for the desert environment. Unfortunately, it is not flame retardant so the vehicle crewman cannot use it.

Magazines: Soldiers carried as many as 15 magazines with them for this operation. They local purchased two items to facilitate their ability to manage this amount of ammunition.

They purchased several commercial variants of devices to allow for quick magazine changes such as the Readymag product pictured below.



Commercial ReadyMag product

They also purchased commercial bandoleers for wear of additional magazines on the chest and upper leg.



Commercial chest-mounted bandoleer

Multi-Tool: Unanimously positive comments about the Gerber multi-tool (leatherman) provided with the rapid fielding initiative. The multi-tool may be the new bayonet. Very few soldiers carried a bayonet unless required to by unit SOP.

Batteries: Soldiers expressed a strong desire for uniformity of battery types – namely AA's. They did not feel rechargeable batteries were sustainable in the field but they've had very little experience to date with a high density of rechargeable batteries and the equipment to support them.

Conclusion

Overall, soldier equipment performed well and enabled the very impressive execution of a difficult operation these soldiers completed. However, our soldiers are professionals and, as such, have very good opinions about how the equipment should be designed and how it can be improved. I offer the following synopsis from my foxhole:

Top Performers:

- **Lethality:** The soldiers that employed the XM107 and their leaders had nothing but praise for the accuracy, target effect and tactical advantage provided by this weapon.
- **Survivability:** A tie between JSLIST and IBA. Clearly both of these systems are on the right design path.
- **Mobility:** It would be very difficult to get the units to return to the days before the M-Gator...and I wouldn't want to be the one who tries to take it away.
- **Situational Awareness:** Our suite of optics and sensors provide an overwhelming tactical advantage against the quality of threat encountered in Iraq.
- **Sustainment:** The Camelback-type hydration system is clearly what the soldiers desire – just need to emphasize durability.

Top Areas for Improvement:

- **Lethality:** The pistol system requires greater stopping power, improved magazines and a better holster.
- **Survivability:** Combat identification still relies on methods and technologies used 10 years ago. Our army is extremely lethal – we rely too greatly on the discipline and skill of our soldiers.
- **Mobility:** Soldiers can get pretty passionate about boots and socks. Recommend a down-select for boots similar to the one conducted for socks.
- **Situational Awareness:** Communications at squad and below. The squad radio is currently not a PEO Soldier item but one we can help fix with the Land Warrior program.
- **Sustainment:** Soldiers still spend too much of their own money to purchase the quality packs, pouches, belts, underwear, socks and gloves they believe they need for mission success and comfort.