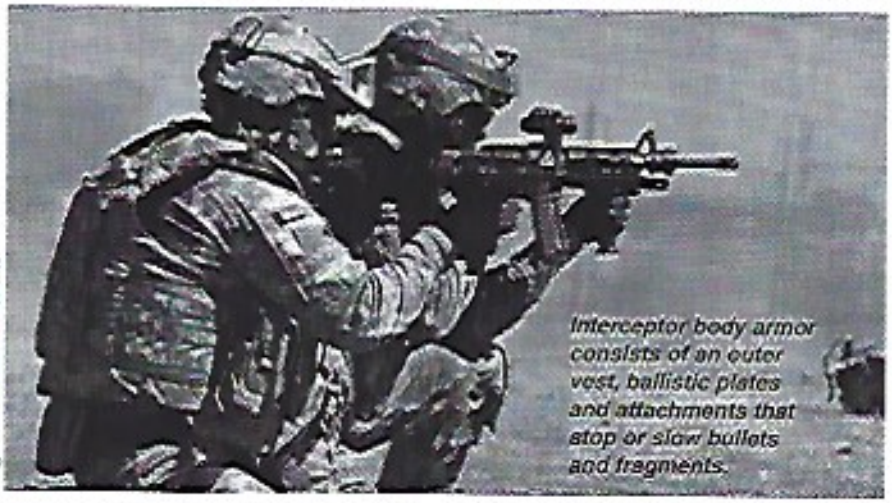
Soldier Armed

Body Armor Update

By Scott R. Gourley

Among the most significant recent developments that directly increase warfighter safety and effectiveness are the enhancements to the protective ensemble known as Interceptor body armor (IBA). As the most up-to-date body armor available, IBA is a modular body armor system that consists of an outer vest, ballistic plates and attachments that increase the areas of coverage. The system increases soldier survivability by stopping or slowing bullets and fragments and reducing the number and severity of wounds.

The front-opening IBA outer tactical vest (OTV) and the new side-opening improved outer tactical vest (IOTV) protect the warfighter against fragments and 9 mm rounds. The protection level of both vest designs is further enhanced through the addition of the enhanced small arms protective insert (ESAPI) plates and the enhanced side ballistic inserts (ESBI). The inserts, composed of composite ballistic ceramic plate with coated ballistic fiber backing, can withstand multiple small-arms hits, including armor-piercing rounds. In addition, deltoid and axillary protectors (DAP) provide additional fragmentation and 9 mm protection to the upper arm and underarm areas; groin and throat protectors are also available.



Program Executive Office Soldier

Interceptor body armor consists of an outer vest, ballistic plates and attachments that stop or slow bullets and fragments.

In a June 2006 statement before the House Armed Services Committee, then-Maj. Gen. Stephen M. Speakes, who was director, Force Development, Office of the Deputy Chief of Staff, G-8, offered a brief chronology of the IBA program, which highlighted the linkage between that program's evolution and warfighter feedback.

- 1999—The Army started fielding the OTV with small arms protective inserts (SAPI) to soldiers deployed in Bosnia.
- April 2004—Theater reported 100 percent fill of 201,000 sets of IBA (OTV and SAPI) for every U.S. Army soldier and DoD civilian in theater.
- April 2004—Theater requested deltoid and axillary protectors. Fielding began in June 2004, and the requirement of 172,860 DAPs was met in January 2005.
- January 2005—Theater requested enhanced small arms protective insert, which provides increased protection for soldiers. Requirement established at 201,000 sets.
- September 2005—Theater requested ballistic side plates. Expected completion of the 201,000 requirement is December 2006.
- January 2006—Theater ESAPI requirement met.

According to Lt. Col. Robert Myles, U.S. Army product manager for Soldier Survivability with the Office of Program Executive Office Soldier, the latest system improvements integrated into the new improved outer tactical vest, as with earlier advances, reflect additional feedback from soldiers in the field.

"We receive that feedback in different ways," Myles explained. "One way, for example, was through a soldier protection demonstration that we conducted in August 2006 at Fort Benning, Ga. We had industry provide us some body armor for soldiers to evaluate. These were soldiers that had just returned from Iraq and Afghanistan. And they went through several round-robin events with different types of body armor from the different vendors."

The soldier experience in those events—which included egress, ingress, obstacle courses, road marches and weapons-range firing—helped to support an operational need statement (ONS) that called for enhancements to the outer tactical vest element of IBA.

"In February of 2007 we received an operational need statement from the field," Myles said. "And [in the ONS] the field was asking us to provide a lighter body armor, a quick release and a system that would distribute the load of the body armor and the load that soldiers were carrying."

The immediate response was the creation of the IOTV. Myles noted that just 60 days after receipt of the ONS, the Army was shipping IOTVs to theater. The shipments represented the first of 230,000 of the new IOTVs being fielded as theater provided equipment to meet the immediate needs of warfighters in Iraq and Afghanistan.

Two contractors are currently involved in the IOTV fielding to theater: Point Blank Body Armor and BAE Systems (formerly Specialty Defense, a part of Armor Holdings' Aerospace & Defense Group before the acquisition of Armor Holdings by BAE Systems).

"The most significant improvement



U.S. Army/Maj. Wayne Marotto

During a training session for the 2nd Brigade Combat Team, 1st Armored Division, Sgt. Brian Freeman pulls the quick-release cable on Sgt. William Huff's improved outer tactical vest (IOTV).

in the IOTV is the quick-release system, which provides the soldier with the capability to remove his or her vest in emergency situations," Myles said. "If soldiers find themselves in a vehicle that turned over or in a body of water—those types of emergency situations—then they would use the quick release."

Moreover, the new design also reduces overall system weight by 3 to 3.5 pounds between the outer tactical vest and improved outer tactical vest, depending on size. Significantly, that weight reduction was accomplished while retaining the same ballistic effects and actually increasing the area of coverage—tactical magic achieved through a reduction in overlapping and a more streamlined design.

"We also added three more sizes," Myles continued. "The OTV was in eight sizes, but now we have 11 sizes of IOTV. We added sizes for soldiers who had longer torsos; so we now have medium-long, large-long and extra large-long vests."

Other enhancements in the IOTV include multiple adjustment points to improve fit, weight distribution and load-carriage capabilities, as well as a mesh lining for better ventilation.

Since components of the two vests are compatible, Myles said that soldiers who receive the new IOTV will take the deltoid and axillary protectors from the OTV and put them on the IOTV, as well as their ESAPI plates and the ESBI side plates. The IOTV has throat protection and underarm protection built in.



Petty Officer 2nd Class Kelly A. Burgess

Lt. Col. Robert Myles, product manager for Soldier Survivability for the Program Executive Office Soldier, demonstrates features of the IOTV at the Pentagon.

Myles noted that in April, the Army will be completing deliveries of the first 230,000 IOTVs to soldiers in Iraq and Afghanistan, as well as soldiers on their way to those theaters. He added that follow-on plans call for an expansion of IOTV fielding across the Army.

"We have been approved to field the entire Army," he noted. "Our AAO [Army acquisition objective] is 966,000 of the IOTV. And there is a request for proposal for the remainder of the 966,000 that we will field to the remainder of the Army."

In terms of future potential enhancements to IBA, the Army product manager observed, "We are always looking for ways to improve the protection for our soldiers. We do continuous research and development on ways to increase the levels of protection and at the same time keep the weight down to something our soldiers can carry. So we do have efforts all the time to improve the body armor and increase the levels of protection.

"I want the soldiers to know that they have someone who is looking to provide them equipment in their best interest, and to know that the body armor they are currently being fielded is the best body armor currently available. But we are never satisfied. [We're] always looking at advanced technologies for ways to improve our body armor." ★