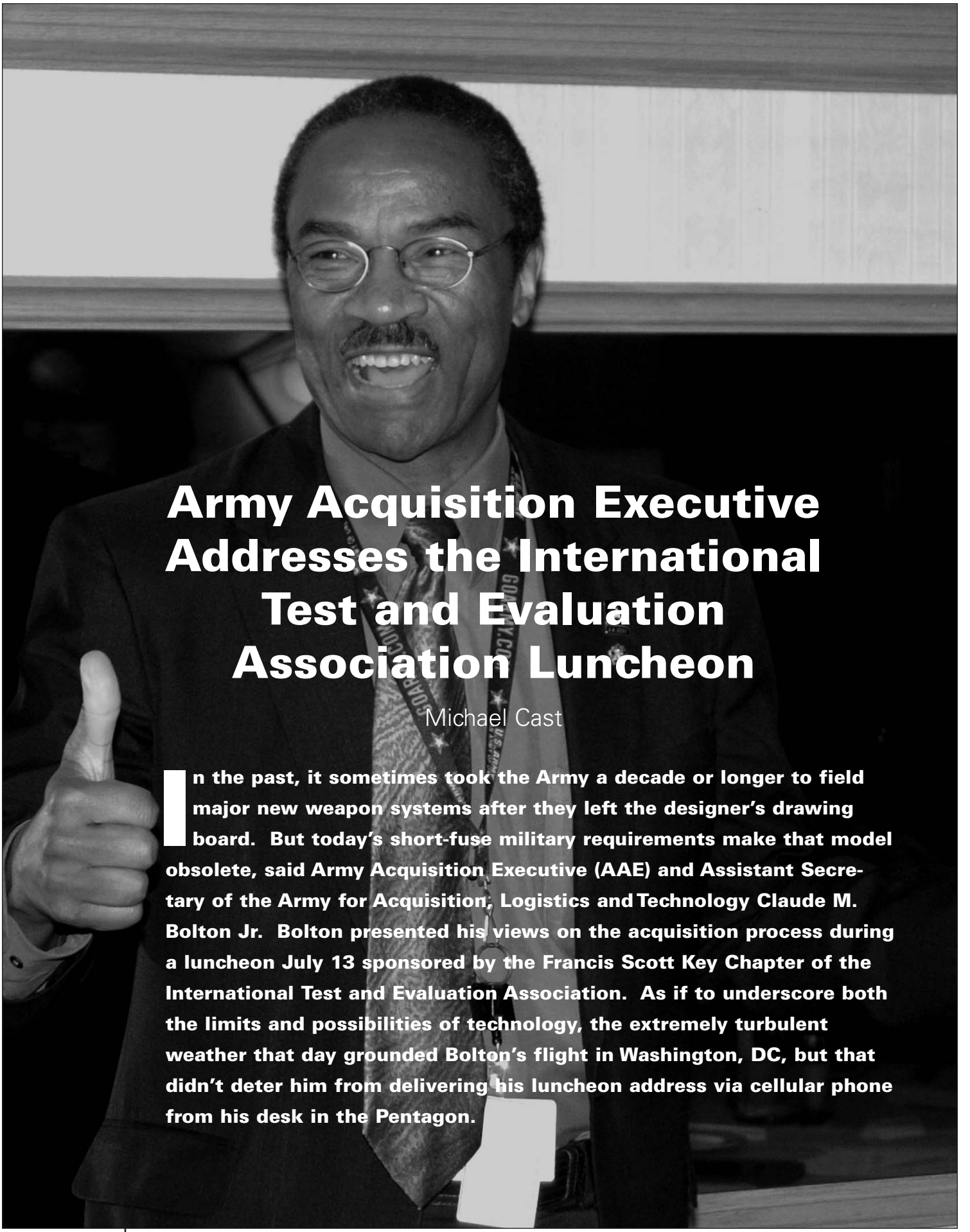


Army Acquisition Executive Addresses the International Test and Evaluation Association Luncheon

Michael Cast

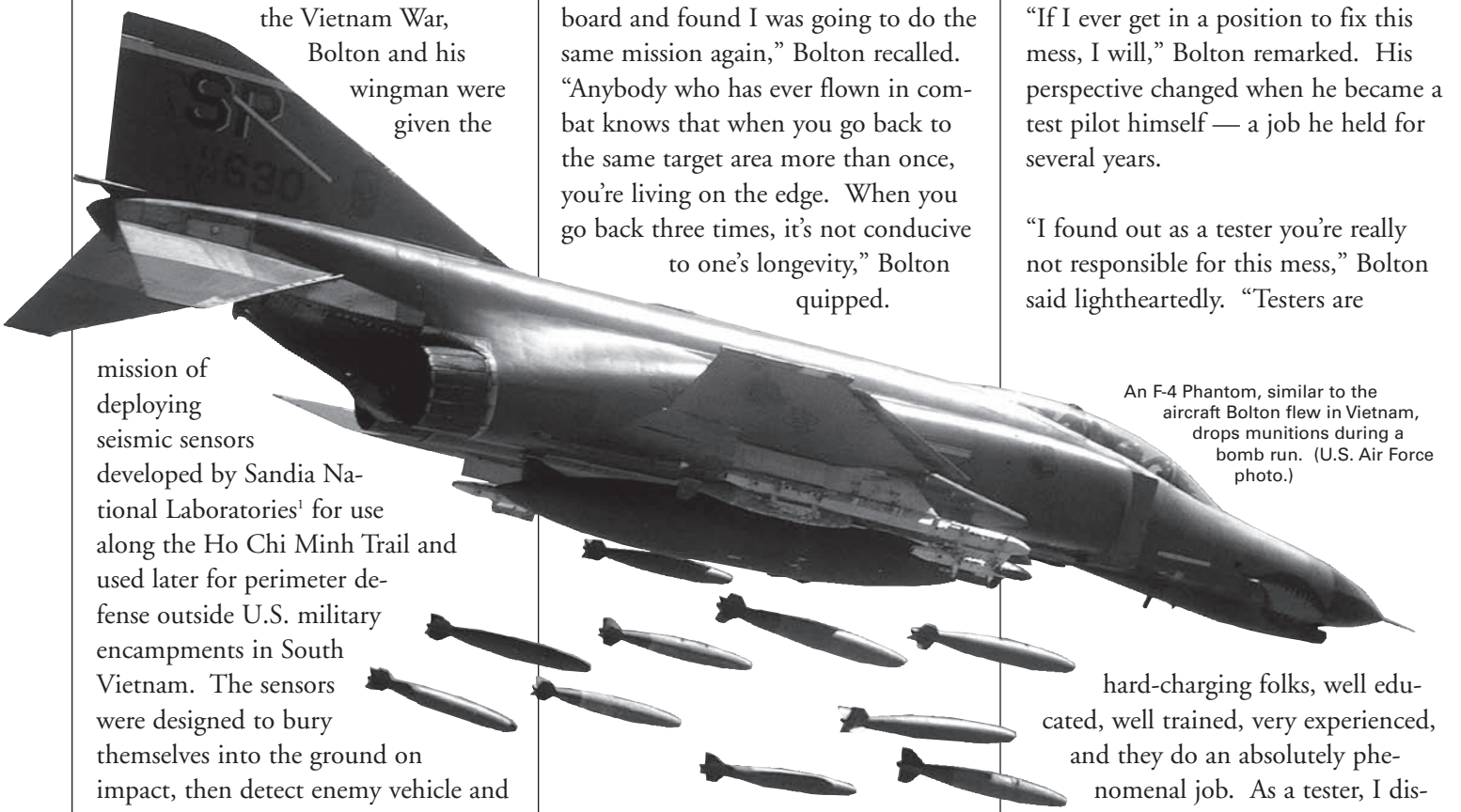
In the past, it sometimes took the Army a decade or longer to field major new weapon systems after they left the designer's drawing board. But today's short-fuse military requirements make that model obsolete, said Army Acquisition Executive (AAE) and Assistant Secretary of the Army for Acquisition, Logistics and Technology Claude M. Bolton Jr. Bolton presented his views on the acquisition process during a luncheon July 13 sponsored by the Francis Scott Key Chapter of the International Test and Evaluation Association. As if to underscore both the limits and possibilities of technology, the extremely turbulent weather that day grounded Bolton's flight in Washington, DC, but that didn't deter him from delivering his luncheon address via cellular phone from his desk in the Pentagon.

Bolton began his presentation by asking a question he had asked himself as a combat pilot during the Vietnam War, when he had to repeat a hazardous mission to deploy a new system that didn't work the first time around: "Who is responsible for this thing?"

As F-4 Phantom pilots during the Vietnam War, Bolton and his wingman were given the mission of deploying seismic sensors developed by Sandia National Laboratories[1] for use along the Ho Chi Minh Trail and used later for perimeter defense outside U.S. military encampments in South Vietnam. The sensors were designed to bury themselves into the ground on impact, then detect enemy vehicle and troop movements along the trail and relay that information via aircraft to a ground station.

The two pilots were to drop sensors along one end of a valley one night and along the other end the second night. After they completed their mission on the second night, a mission made riskier by returning to an area on which North Vietnamese gunners had trained their sights, Army operators discovered the sensors weren't going to work because the pilots were given an incorrect air speed and altitude needed for placing the sensors properly.

"By night number three, when I came in for my briefing expecting I would get a whole lot better mission than flying along dropping stuff on the ground, I looked on the scheduling board and found I was going to do the same mission again," Bolton recalled. "Anybody who has ever flown in combat knows that when you go back to the same target area more than once, you're living on the edge. When you go back three times, it's not conducive to one's longevity," Bolton quipped.



An F-4 Phantom, similar to the aircraft Bolton flew in Vietnam, drops munitions during a bomb run. (U.S. Air Force photo.)

After getting the correct data, Bolton and his wingman split the fire on the third night by flying over the valley toward each other from opposite directions, but they were still greeted by a display of firepower that reminded Bolton of Fourth of July fireworks.

> "The warfighter starts the clock when his hand goes up and he says, 'I want,' and the clock stops when his hand goes down and he says 'I got.'"

"We dropped all the sensors at the right air speed and at the right altitude and returned to base," Bolton reminisced. "I got out of my aircraft and gave the large pieces of it back to the crew chief, and I started to kick the tarmac as I walked back to my mission debrief thinking, 'Somebody is responsible for this mess.'"

At that time, he said he blamed the screw-up on test pilots initially because he didn't know who else had a role to play in fielding systems of this type. "If I ever get in a position to fix this mess, I will," Bolton remarked. His perspective changed when he became a test pilot himself — a job he held for several years.

"I found out as a tester you're really not responsible for this mess," Bolton said lightheartedly. "Testers are hard-charging folks, well educated, well trained, very experienced, and they do an absolutely phenomenal job. As a tester, I discovered who I thought was fully responsible for this mess. It had to be the folks in the program offices," he continued. "These folks never give the testers enough time. They never give us enough money. They only believe about half of what we say. They hear the parts that they want to hear. And so I said, 'If I ever have an opportunity, I will fix this mess.'"

Bolton's military acquisition career includes stints in three separate program offices, where he found people to be "hard-charging, well educated and well trained." He found the same kind of hard-charging people in the Pentagon when he arrived at that "5-sided headquarters." Then he happened to look

out a window at the Pentagon to see the big domed building on the hill, he thought maybe the people up there were the guilty ones. Of course, he soon realized they too were "hard-charging and well educated" and only had the best intentions for the Nation's military men and women. The answer to Bolton's initial question, naturally, is that everyone involved with the acquisition process is responsible for its failures and successes.

"You may have heard that we're going to improve the acquisition process yet again this year," Bolton told luncheon attendees. "We will put teams together. We will put panels together. We will have policy papers and briefs over on the Hill that will hopefully become legislation."

None of that will really solve acquisition problems, he suggested, unless the entire process is examined with a focus on providing warfighters what they want, when they want it and where they want it. To illustrate, he described what he called the "little a," or acquisition as it occurs now, and the "big A," which is the way the acquisition process must occur from beginning to end if it is to truly meet the needs of our combatant commanders and their Soldiers.

"The 'little a' is what we all do in this community," Bolton explained. "We acquire, we develop, we test, we use, we field, and we have lots of rules and regulations. We go to classes, and we get certified. I've been at this for more than 25 years, and we've been doing it formally by law since the early 1990s. The problem is, you could make the acquisition process absolutely perfect and not have helped the warfighter. The warfighter starts the clock when his hand goes up and he says, 'I want,' and the clock stops when his hand goes down and he says 'I got.' So my push this year is that, if we really want to help our warfighters, let's look at the entire acquisition process and put some effort into improving everyone and every part of the process."

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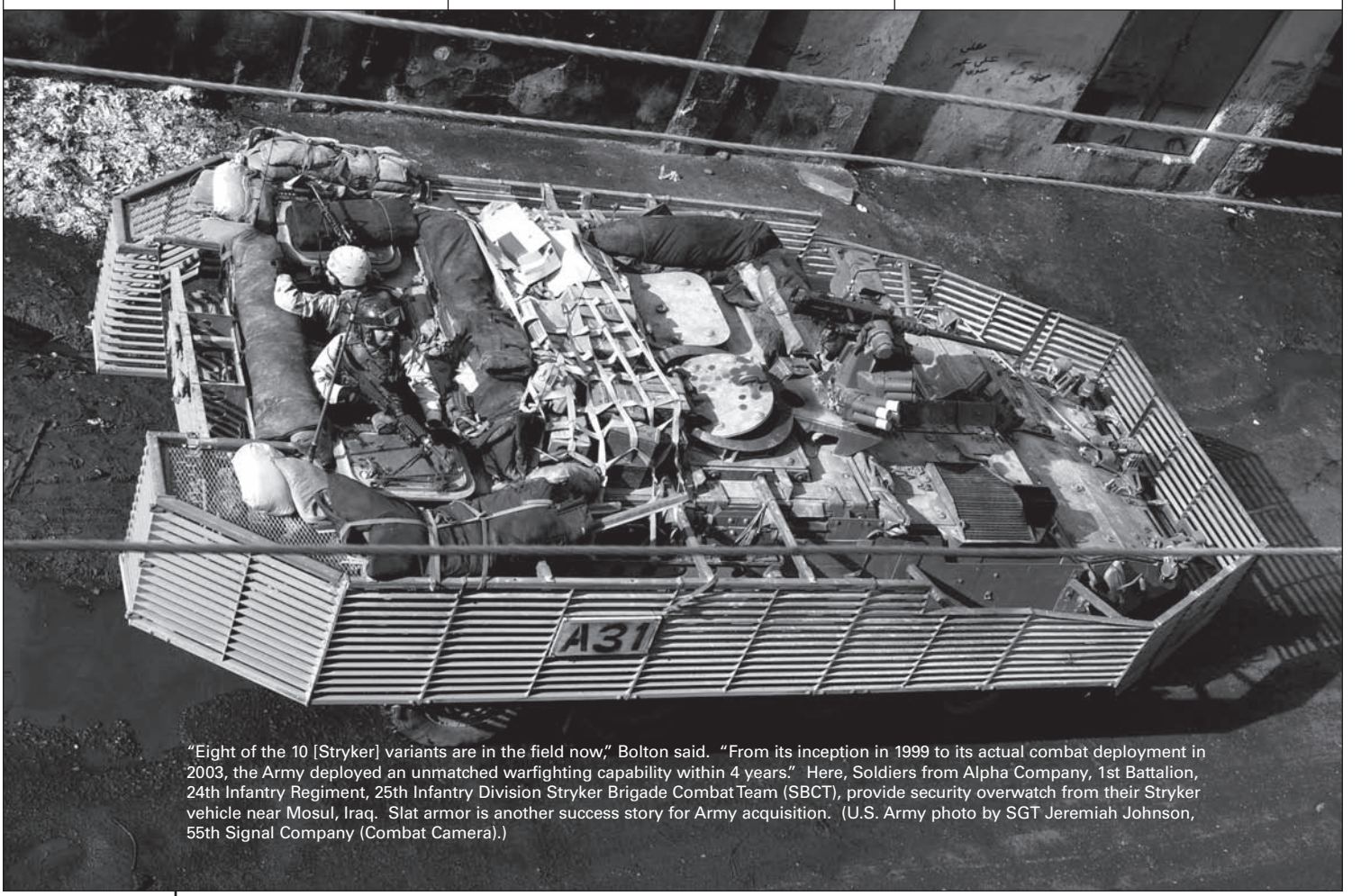
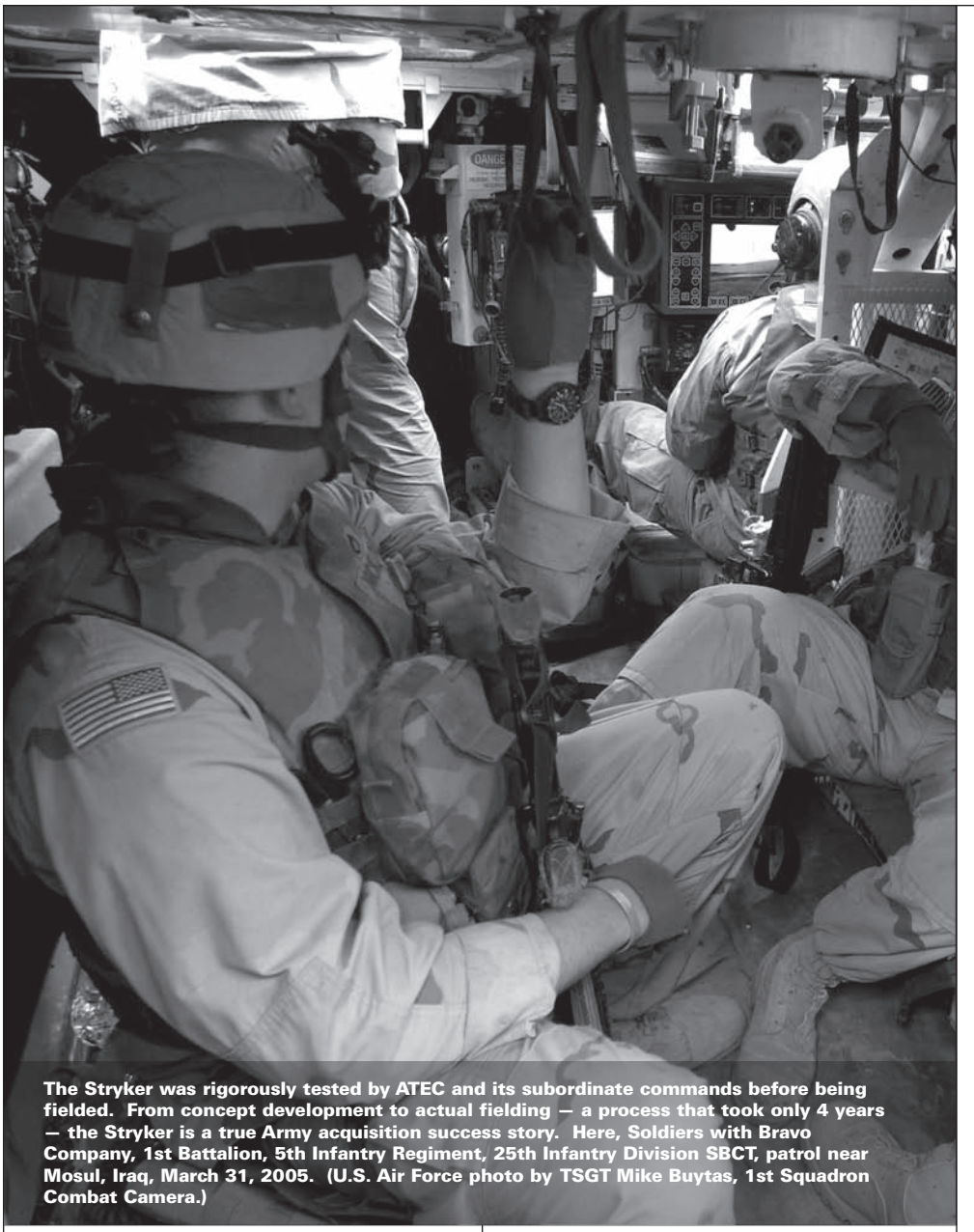


"Eight of the 10 [Stryker] variants are in the field now," Bolton said. "From its inception in 1999 to its actual combat deployment in 2003, the Army deployed an unmatched warfighting capability within 4 years." Here, Soldiers from Alpha Company, 1st Battalion, 24th Infantry Regiment, 25th Infantry Division Stryker Brigade Combat Team (SBCT), provide security overwatch from their Stryker vehicle near Mosul, Iraq. Slat armor is another success story for Army acquisition. (U.S. Army photo by SGT Jeremiah Johnson, 55th Signal Company (Combat Camera).)



The Stryker was rigorously tested by ATEC and its subordinate commands before being fielded. From concept development to actual fielding — a process that took only 4 years — the Stryker is a true Army acquisition success story. Here, Soldiers with Bravo Company, 1st Battalion, 5th Infantry Regiment, 25th Infantry Division SBCT, patrol near Mosul, Iraq, March 31, 2005. (U.S. Air Force photo by TSGT Mike Buytas, 1st Squadron Combat Camera.)

Bolton said everyone on the acquisition team must work together to give warfighters what they want, when they want it and where they want it. To do this, everyone must also be well trained, which may require formal education in classroom settings for many.

"We have very good people throughout this process," Bolton stated. "Everybody is working hard and doing the very best they can. But if you're not providing the training — and I mean classroom-type training, book-type education — and the right tools for everybody in this process, and I mean everybody, then we are suboptimizing, and the person who is paying for this is in the foxhole."

Bolton provided several success stories about programs that take very little time to go from warfighters saying, "I want" to "I got," including the Army's Rapid Fielding Initiative. This program provided Soldiers with a wide array of combat equipment over a very short time span, equipping nearly 250,000 troops with about $3,000 to $5,000 worth of items per individual Soldier.

"I had the pleasure of talking to the Soldiers in the 3rd Infantry Division just before they redeployed to Iraq, and they're extremely happy with the quality of the equipment and the fact that they got it when they wanted it and where they wanted it," Bolton observed.

Another Army success story was the Rapid Equipping Force items fielded to Soldiers in Afghanistan to help them clear caves. The PackBot (see photo on Page 4) — a robotic device developed by iRobot Corp. — helped Soldiers locate and then detonate mines, improvised explosive devices (IEDs) and other potentially hazardous items, thereby saving Soldiers' lives.

"We sent COL Bruce Jette over to Afghanistan as that conflict began," Bolton recalled, "and we said, 'go visit our Soldiers and find out what they want and see how we can best support them with new technology and help them better use the technology they already have.' Well, COL Jette proved to be a good choice. He's a Soldier first who just happens to hold a Ph.D. from MIT [Massachusetts Institute of Technology]. As a fellow Soldier, he inspired the trust and confidence of those on the ground. A Soldier talking to Soldiers enabled quick solutions that saved lives and addressed urgent requirements. Solutions such as the PackBot, which took only about 4 weeks to develop, became another Soldier over in Afghanistan. Now we have hundreds of these robots over there

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clearing caves, mines and IEDs. Everyone loves them."

Bolton noted that dozens of much-needed items have been put into the hands of Soldiers, some within a matter of hours and all within 90 days or less.

"The Stryker, a system rigorously tested by the Army Test and Evaluation Command [ATEC] and its subordinate commands, is a true success story for Army acquisition," Bolton added.

"Eight of the 10 variants are in the field now," he continued. "We have the 2nd Stryker Brigade Combat Team in northern Iraq as we sit here today. From its inception in 1999 to its actual combat deployment in 2003, the Army deployed an unmatched warfighting capability within 4 years. This was an entire full-up, combat-capable brigade — not just the 100-plus Stryker vehicles, but all the other vehicles, everyone trained and fighting a war. Under the normal process, the Stryker alone should have taken 10 to 15 years to develop, and we did everything in 4 years. We understood the requirement, we had the resources, we had the right people who did everything correctly, and now the people who are benefiting from this are the Soldiers at the 'tip of the spear.' If you ever want to know how well this is working, don't talk to me. Talk to the men and women who are using this vehicle today. It has an absolutely phenomenal capability against everything the enemy over there throws at us," Bolton emphasized.

> "Though the issues are complex, I am extremely confident the test and evaluation community and its partners in acquisition will surmount the technological obstacles ahead due to the expertise and commitment of the people involved."

The biggest challenge in the years ahead for ATEC and other partners in the acquisition community is to field Future Combat Systems (FCS).

"It is the first truly, for the Army, system-of-systems and the largest system-of-systems program ever done by DOD, let alone the Army — 18 systems wrapped around a network and focused on the Soldier," Bolton explained. "There has been a lot in the news. The truth of the matter is the FCS program is a green program. It is doing what the Army wants it to do, and we will have a capability that is unsurpassed anywhere in the world. As our technology moves forward, it will be spiraled to the field.

"The continued development of effective modeling and simulation tools for the FCS program is essential," Bolton continued. "The FCS program could not survive without modeling and simulation. How do you test a system-of-systems capability? How do you test spiraled technology? How do you do that so the timeline is reduced from 2, 3 or 4 years to less than 1 year? We need modeling and simulation with fidelity enough that we can reduce the risks the engineers see and reduce the time we're taking to field these complex systems and equipment. Army testers have been working to answer these questions and solve these problems from 'day one' because of FCS' complexity," Bolton summarized.

"The models that we have were good in the Cold War and may have been good 10 years ago, but they are seriously strained given today's operational environments," he warned. "It is imperative that we answer the question, 'What will happen to the Soldier in the foxhole if a system doesn't perform to a certain standard?' We've got to be able to answer that question," Bolton emphatically stated.

"Though the issues are complex, I am extremely confident the test and evaluation community and its partners in acquisition will surmount the technological obstacles ahead due to the expertise and commitment of the people involved," Bolton exclaimed. "People in the Army are central to everything that we do. People make it happen. I like to say that institutions don't transform — people do," he concluded.

[1] Documented from research article titled "Building On and Spinning Off: Sandia National Labs' Creation of Sensors for Vietnam," SAND96.2824C, Rebecca Ulrich, Nov. 8, 1996.

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