

Terrorism Open Source Intelligence Report (TOSIR) No. 410 19 November 2009

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[Article 1](#) **“Al-Qaeda Calls for Home-Made Bomb Attacks in West,” Reuters, 2 November 2009.** *The leader of Al-Qaeda’s wing in the Arabian Peninsula called on militants to attack airports and trains in the West, countries involved in wars in Muslim countries, as well as government figures and security bodies in the Middle East. In the group’s Internet magazine, Abu Basir Nasser al-Wahayshi also urged militants to assault secular media figures and columnists who promote the policies of rulers in the world’s top oil exporting region. To do this, he argued that they could easily make bombs from household materials.*

[Article 2](#) **“Roadside Bombs Frustrate U.S., Spur Review of Defense,” by Tony Capaccio, Bloomberg News, 4 November 2009.** *The increasing power and effectiveness of roadside bombs in Afghanistan has spurred the U.S. military to reassess its defenses even as it rushes more blast-resistant vehicles to the region. U.S. deaths from roadside bombs through 30 September numbered 139, compared with 78 in all of 2008. Defense Secretary Robert Gates met at the Pentagon on 4 November with military officials involved in buying fortified vehicles, developing anti-bomb technologies, and running aerial reconnaissance to spot militants laying bombs.*

[Article 3](#) **“In Afghan War, U.S. Scrambles to Fight Crude But Lethal IED,” by Dan De Luce, Agence France-Presse, 1 November 2009.** *The world’s most powerful military machine is scrambling to fight a simple, low-tech weapon in Afghanistan—the improvised explosive device, or IED—that is killing and maiming American and allied soldiers at an alarming rate. The homemade bomb—often a mixture of fertilizer, fuel, and metal—is the number one killer of NATO troops in Afghanistan and the U.S. military has launched a massive, costly effort to try to defeat it.*

[Article 4](#) **“U.S. Sees Makeshift Bombs Moving beyond Iraq and Afghanistan,” by Thom Shanker, New York Times, 29 October 2009.** *American military officers are expressing concern over the spreading use of makeshift bombs beyond the war zones of Iraq and Afghanistan to other countries in the region, as well as in East Asia and South America. Improvised explosive devices have been the largest killer of American forces in Iraq and Afghanistan, showing up with devastating effect in Pakistan and India, but also with less notice in Thailand, Sri Lanka, the Philippines, Colombia, Somalia, and parts of North Africa.*

[Article 5](#) **“Army General Oates Tapped to Replace Metz as JIEDDO Director,” by Marjorie Censer, Inside Defense, 4 November 2009.** *President Obama has nominated Army Major General Michael Oates for a third star and the position of director of the Joint Improvised Explosive Device Defeat Organization (JIEDDO). Oates would succeed Army Lieutenant General Thomas Metz and be only the third director of the organization, which began as the Joint Improvised Explosive Device Defeat Task Force but was upgraded to a permanent body in January 2006. It operates as the Pentagon’s single manager of efforts to combat roadside bombs.*

[Article 6](#) **“The Battle against IEDs: New Technologies to Counter the Scourge of Iraq and Afghanistan,” by Sharon Weinberger, New York Post, 25 October 2009.** *The Pentagon has tested just about every technology imaginable against improvised explosive devices (IEDs). How*

much are these technologies helping to reduce the deadly bombs? No one can say for sure, but one thing is certain: Even as the IED attacks have dropped off precipitously in Iraq, they are surging in Afghanistan. Like in Iraq, the Pentagon has deployed to Afghanistan a wide array of technologies, but getting emerging technologies from the laboratory to the battlefield has proved a challenge as it's often hard for companies with good technologies to get a fair hearing in the Pentagon. Yet there is no silver bullet; what's really needed is an array of technologies.

[Article 7](#) **“Afghan Roadside Bombs a New Priority for U.S.,”** by **Walter Pincus**, **Washington Post**, **15 November 2009**. *Defense Secretary Robert M. Gates is creating a department-wide task force to focus on ways to counter the roadside bombs that have caused 80 percent of U.S. casualties in Afghanistan. The challenges are different from those in Iraq for several important reasons. Gates has recently expressed concern about whether the Pentagon groups working on the threat—the Joint Improvised Explosive Device Defeat Organization, the intelligence community, and the commanders in the field—are properly integrated and sufficiently flexible.*

[Article 8](#) **“Rethinking IED Strategies: From Iraq to Afghanistan,”** by **Commander John Moulton**, U.S. Navy, **Military Review** (U.S. Army Combined Arms Center), **July-August 2009**. *Improvised explosive devices (IEDs) have been emblematic of the insurgency in Iraq as well as Afghanistan. Coalition forces cannot out-armor or out-engineer the problem, although an IED's physical effects can be mitigated. We will not defeat the IED problem with a single solution. Nor will we likely ever solve it in the literal sense. However, if we counter IED attacks as part of an overarching counterinsurgency strategy, we can reduce an insurgency's ability to gain strategic advantages with IEDs. Iraq and Afghanistan will not likely be the last place where the United States will confront an insurgent IED campaign.*

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1. **“Al-Qaeda Calls for Home-Made Bomb Attacks in West,”** **Reuters**, **2 November 2009** (<http://www.reuters.com/articlePrint?articleId=USL2289900>). [KBTTBombs, KBTQStatements]
We quote:

Dubai, United Arab Emirates—**The leader of Al-Qaeda's wing in the Arabian Peninsula called on militants to attack airports and trains in the West and said they could easily make bombs from household materials, the group's Internet magazine said.**

[**Militant leader: You do not need to exert great effort, spend lots of money to make bombs**]

The Islamist group has been trying to secure small victories to maintain its feared image after its leaders' threats to carry out large-scale attacks on Western targets have been discounted as words without deeds, analysts say. Abu Basir Nasser al-Wahayshi, in an article in the e-magazine Sada al-Malahem, also urged militants to

assault secular media figures and columnists who promote the policies of rulers in the world's top oil exporting region.

“You do not need to exert great effort or spend a lot of money to make ten grams of explosives, more or less. Do not spend a long time searching for materials as they already exist in your mother's kitchen,” Wahayshi wrote in the article, posted on an Islamist Website on Sunday. **“Make them [bombs] in the shape of a bomb you hurl, or detonate through a timer or a remote detonator or a martyrdom-seeker belt or any electrical appliance.”**

Wahayshi said bombers **should attack countries involved in wars in Muslim countries as well as government figures and security bodies in the Middle East. Over the past two years, Al-Qaeda has been active mainly in Muslim countries like Algeria, Iraq, Afghanistan, and Yemen** after carrying out the 11 September 2001 attacks on U.S. cities.

[Al-Qaeda militants attacked several Mid-East countries trying to destabilize governments]

Wahayshi urged followers to use knives or sticks to attack “secular media figures and writers who mock the orders of religion and those who promote and justify [the actions] of infidel rulers.” “Knives are a good remedy for some and . . . [for others] severe beating until they are confined to bed or lose one of their senses,” added the militant leader. **Calling on militants to assassinate Al-Qaeda's enemies,** Wahayshi stated that, “It is a duty that a Muslim mujahid be busy planning to reap the heads of infidels.”

In August, an Al-Qaeda suicide bomber tried to kill the Saudi prince in charge of the kingdom's anti-terrorism campaign, the first attack on a member of the royal family since the group began a wave of violence in the country six years ago.

Saudi Arabia, the world's largest oil exporter and a key U.S. ally in the Middle East, **was forced to confront its own role in rising militancy at home and abroad** when its nationals turned out to be behind the 11 September attacks. **Several countries in the region have been attacked by Al-Qaeda militants trying to destabilize Western-allied governments.**

The foregoing is Article No. 1 (TR410A01) in the **Terrorism Open Source Intelligence Report** (TOSIR), No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isincreports@mindspring.com).

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2. “Roadside Bombs Frustrate U.S., Spur Review of Defense,” by Tony Capaccio, Bloomberg News, 4 November 2009. [KBTTBombs, KBTSAfghanGW] We *quote* from <http://www.bloomberg.com/apps/news?pid=20601103&sid=aUIzqpEzr.wo>:

The increasing power and effectiveness of roadside bombs in Afghanistan has spurred the U.S. military to reassess its defenses even as it rushes more blast-resistant vehicles to the region. October was the deadliest month of the Afghan campaign for the United States, with 59 troops killed. Seven died on 27 October when

their armored vehicle was hit by a 1,000-pound bomb made of fertilizer, Pentagon spokesman Geoff Morrell said today. . . .

[U.S. roadside bombs deaths through September numbered 139, compared with 78 in 2008]

Defense Secretary Robert Gates met at the Pentagon late today with military officials involved in buying fortified vehicles, developing anti-bomb technologies, and running aerial reconnaissance to spot militants laying bombs, Morrell told reporters. Representatives from the U.S. Central Command and NATO also attended, he said. **“We need to be attacking this problem from 360 degrees,”** Morrell said. **“By watching the roads, by watching for patterns of life, by mapping those patterns, by developing intelligence that allows us to penetrate the networks and take them down.”**

“There’s not an armored vehicle you could build that would likely protect you against a 1,000-pound fertilizer bomb,” he said. **The United States is starting a program in southern Afghanistan to buy from farmers excess fertilizer** that could be used to make bombs, Morrell said.

Another response to the problem, Morrell said, is to **accelerate delivery of new fortified off-road trucks [MRAP All Terrain Vehicles, or M-ATVs], made by Oshkosh Corporation**, which is based in the Wisconsin town of the same name. Oshkosh **committed to doubling to 1,000 its monthly production of new blast-proof, all-terrain trucks** that will allow the U.S. military to accelerate training on the vehicles and keep more troops in combat areas, according to the Pentagon’s top weapons buyer. . . .

U.S. deaths from roadside bombs through 30 September numbered 139, compared with 78 in all of 2008, according to Pentagon statistics. U.S. troops wounded from roadside bombs jumped to 760 through 30 September, almost twice the number in all of last year. **The number of United Kingdom troops killed by roadside bombs increased to 56 through 30 September, compared with 29 in 2008**; the number of United Kingdom troops wounded more than doubled to 261 through 30 September this year from 129 in all of last year, according to Pentagon statistics.

The foregoing is Article No. 2 (TR410A02) in the **Terrorism Open Source Intelligence Report (TOSIR)**, No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isinreports@mindspring.com).

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3. **“In Afghan War, U.S. Scrambles to Fight Crude But Lethal IED,”** by Dan De Luce, **Agence France-Presse, 1 November 2009**. [KBTTBombs, KBTSAfghanGW, KBTSIraqGW] We quote from <http://news.yahoo.com/s/afp/usafghanistanmilitarybombs>:

Washington, D.C.—**The world’s most powerful military machine is scrambling to fight a simple, low-tech weapon in Afghanistan** that is killing and maiming American and allied soldiers at an alarming rate. **The homemade bomb—often a mixture of fertilizer, fuel, and metal—is the number one killer of NATO troops in Afghanistan and the U.S. military has launched a massive, costly effort to try to defeat it.**

[Bombs in Afghanistan spread over enormous area with few paved roads—unlike in Iraq]

In Iraq, the Americans eventually managed to contain the scourge partly by employing jamming devices and large numbers of unmanned aircraft that could watch for insurgents planting roadside bombs. But the rudimentary improvised explosive devices (IEDs) in Afghanistan have no radio frequency to jam while the country's vast, rural landscape makes surveillance a daunting task, U.S. officers said.

“You've got an entirely different challenge in Afghanistan,” said Lieutenant General Thomas Metz, head of the Pentagon's Joint Improvised Explosive Device Defeat Organization (JIEDDO). “It looks about like the moon sometimes. It's huge, open spaces. Not much vegetation. It's an unbelievable, tough, rugged terrain,” he told reporters after a congressional hearing.

American soldiers learned to identify suspicious objects on paved streets in Iraq, but NATO forces in Afghanistan have trouble picking out trip wire or booby traps on dirt roads, said Command Master Sergeant Todd Burnett of JIEDDO, who regularly visits troops on the Afghan front. Soldiers who only recently arrived in Afghanistan are still trying to figure out how to handle the IED threat there, he said.

“For so long we've been focused on Iraq,” he said. “We're still learning the environment over there. . . . We're playing catch-up.” And unlike Iraq, where much of the insurgent activity was concentrated in city centers, the bombs are spread over an enormous area, he said. The threat has steadily mounted in Afghanistan, with more than 1,000 IEDs found or exploded in August—a dramatic increase from just a year ago. But the scale of the threat is still much lower than what U.S. and Baghdad forces faced at the height of violence in Iraq, when the number of IED incidents rose to about 2,500 a month.

[Nearly 3,000 new troops trained in explosive disposal, intelligence, route clearance]

General Metz, charged with leading the effort against the homemade bombs, said eliminating IEDs is unrealistic, but he talks about the need to get “left of the boom”—by detecting the bomb before it goes off and targeting the bomb-making networks. His organization, set up initially in 2006 to tackle the scourge in Iraq, invested close to a billion dollars over the past year in technology, training, and other initiatives to battle the homemade bombs.

Metz said he hopes sensors and software can be refined soon to detect small changes on the ground, revealing where an insurgent may have dug up a road or set down a trip wire. But he said the “game-changing” technology is still not there. “We're left with some real tough physics problems,” he said, as the sensor has to deliver reliable information soon enough to allow a vehicle speeding down the road to stop before reaching the bomb.

To protect troops, the Pentagon is rushing the production of new armored vehicles for Afghanistan as a version designed for Iraq has proved too bulky for the country's treacherous terrain. Seven of the new [MRAP All Terrain Vehicles, or M-ATVs] have been delivered and the Pentagon has approved plans to quickly produce more to ship to the war. . . .

While President Barack Obama weighs a request for a major troop buildup, Defense Secretary Robert Gates already has deployed nearly 3,000 [troops] who are trained in explosive disposal, intelligence, and route clearance to contain the IED threat.

Commanders are working to shift much of the coveted unmanned aircraft fleet from Iraq to Afghanistan to spy on insurgents planting bombs, and the military has bought new, smaller robots that can help soldiers dismantle explosives in a more rugged setting. In the meantime, the IEDs are wreaking havoc, killing and badly wounding Western troops and Afghans while piling pressure on the NATO-led mission. . . .

The foregoing is Article No. 3 (TR410A03) in the **Terrorism Open Source Intelligence Report** (TOSIR), No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isinreports@mindspring.com).

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4. “U.S. Sees Makeshift Bombs Moving beyond Iraq and Afghanistan,” by Thom Shanker, New York Times, 29 October 2009. [KBTTBombs, KBTSAfghanGW, KBTSIraqGW] From <http://www.nytimes.com/2009/10/29/world/29military.html> we *quote*:

Washington, D.C.—**American military officers are expressing concern over the spreading use of makeshift bombs beyond the war zones of Iraq and Afghanistan to other countries in the region, as well as in East Asia and South America.**

[U.S. cannot be beaten tactically by the IED—but strategic aim is to wear down U.S. will]

Improvised explosive devices (IEDs), as the military calls them, have been the largest killer of American forces in Iraq and Afghanistan, showing up with devastating effect in Pakistan and India, but also with less notice in Thailand, Sri Lanka, the Philippines, Colombia, Somalia, and parts of North Africa. Even Russian security forces have faced the devices in the republics of Ingushetia and Dagestan, although attacks in Chechnya have fallen.

“There is a robust and constant IED effort among violent extremists who are using it as their weapon of choice,” said Lieutenant General Thomas F. Metz, director of the Pentagon’s organization in charge of seeking ways to counter improvised explosives. “That won’t change for decades. We are in this fight for a long time.”

General Metz . . . said global IED cases outside Iraq and Afghanistan averaged about 300 per month. The count includes detonations and the discovery of intact devices. The military’s global statistics on the bombs remain classified, to prevent extremists from knowing what the United States knows. But a compilation of worldwide episodes from private sector security consultants illustrates the threat.

. . . General Metz, who will retire from the military in the coming weeks, acknowledged that while the public had focused on the threat that the bombs posed to American forces in Iraq and Afghanistan, part of his reason for describing the risk of spreading improvised bombs was to argue for continued financing for his organization’s work

on countering them. “What the American people do not realize is that this weapon of choice by violent extremists is being used for strategic purposes,” he said. **“The United States cannot be beaten tactically by the IED—but strategically, these extremists hope to wear down our will.”**

[Pakistan, India, Thailand have all experienced high numbers of IEDs, exploded and found]

Jonathan M. George, of HMS Inc., a private company that analyzes the use of IEDs and consults on countermeasures, maintains **a database on cases, gathered from public documents and news reports, that military officers consider reliable enough to cite in public statements.**

Mr. George said **the count of improvised bombs in Afghanistan had grown from 515 in 2006 to 705 in 2007, 828 in 2008 and 955 so far this year. In Iraq, the annual figures show the count has diminished, from 4,718 in 2006 to 3,275 in 2007, 3,253 in 2008, and 1,135 so far this year. But his compilation also tracks the larger number of IEDs that explode or are found in the rest of the world: 3,267 in 2006, 4,027 in 2007, 4,273 in 2008, and 2,121 so far in 2009.** “Recent events show that although the number of IED attacks has fallen, the number of high-casualty and high-profile attacks continue to rise,” he said.

He said that **Pakistan had experienced the worst problem after a rise that began in 2007,** after the Pakistani military mounted an eight-day siege to end a standoff that lasted for months with Islamic extremists holed up at the Red Mosque in Islamabad. **India has the second-highest number of IEDs, and the level there remains constant,** Mr. George said. **Thailand is third, but the number has decreased following a peak in 2007.**

Extremists are not only increasing the power of their devices but also showing a grim cleverness in the delivery systems. Raids on a Tamil Tigers base in Sri Lanka uncovered an experimental, remotely controlled boat that could be loaded with explosives to slip alongside the hull of a ship for detonation. Other American military officers say that **the improvised bombs are being studied as a military tool by some state powers.**

[North Korean special operations forces training to use improvised explosives]

The senior American commander in South Korea, General Walter L. Sharp, said that **the North Koreans were studying the weapons and their uses.** “We started to work very hard, to make sure we’re learning the lessons out of Iraq and Afghanistan with IEDs and other types of devices,” General Sharp said in Washington last month.

Then, in referring to the North Korean government, he added, **“I’m pretty confident that they have learned” from observing how insurgents used devices in Iraq and Afghanistan. The American military now believes that North Korean special operations forces are training to use improvised explosives.** “I’m confident they will use those capabilities,” General Sharp said. “So we’re working very hard on that now.”

He did not elaborate on how North Korea might employ the bombs. But other American government officials, speaking on the condition of anonymity, described the assessments: **While conflict with the North appears remote, the United States and South Koreans anticipate that if war breaks out, North Korean conventional forces will plant IEDs**

to maul any allied advance from south to north, and that North Korean commandos will **try to infiltrate the south to plant them along major roadways to wound and kill civilians and allied troops**. Senior military officers confirm that American and South Korean forces on the peninsula are now incorporating countermeasures in updated war plans and practicing them in war games.

The foregoing is Article No. 4 (TR410A04) in the Terrorism Open Source Intelligence Report (TOSIR), No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isinreports@mindspring.com).

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5. “Army General Oates Tapped to Replace Metz as JIEDDO Director,” by Marjorie Censer, Inside Defense, 4 November 2009 (<http://www.inside.com>). [KBTTBombs] *We quote:*

President Barack Obama has nominated Army Major General Michael Oates for a third star and the position of director of the Joint Improvised Explosive Device Defeat Organization (JIEDDO), the Pentagon announced today. Oates, the commanding general of the 10th Mountain Division (Light) and Fort Drum, New York, **would succeed Army Lieutenant General Thomas Metz**.

He would be only the third director of the organization, which began as the Joint Improvised Explosive Device Defeat Task Force but was upgraded to a permanent body in January 2006. **It operates as the Pentagon’s single manager of efforts to combat roadside bombs**.

Retired General Montgomery Meigs was the first JIEDDO director. Though he had retired from the Army in January 2003—after serving as the commander of U.S. Army Europe from 1998 to 2002—he assumed directorship of the task force in December 2005. **President George W. Bush nominated Metz to succeed Meigs in late-October 2007**.

Metz, in an appearance before the House Armed Services oversight and investigations subcommittee last week, **said he planned to soon retire after 43 years of service**. “As I near retirement, I could not have asked for a better assignment,” he said during the hearing. **“I could not be more proud of the men and women who are helping me defeat the improvised explosive device as a weapon of strategic influence.”** . . .

The foregoing is Article No. 5 (TR410A05) in the Terrorism Open Source Intelligence Report (TOSIR), No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isinreports@mindspring.com).

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6. “The Battle against IEDs: New Technologies to Counter the Scourge of Iraq and Afghanistan,” by Sharon Weinberger, New York Post, 25 October 2009. [KBTTBombs, KBTSAfghanGW, KBTSIraqGW] Sharon Weinberger writes about national security and technology, and is the author of [A Nuclear Family Vacation](#). *We quote* from this item at http://www.nypost.com/p/news/opinion/opedcolumnists/the_battle_against_ieds_E0BvLUIQR1N10aTKoCJ1UJ:

Airborne sensors that can spot stones being moved near a road, lightning guns that zap explosives, and jammers that disrupt signals used to detonate bombs. The Pentagon has tested just about every technology imaginable against improvised explosive devices, or IEDs, which have plagued U.S. and coalition forces in Iraq and Afghanistan.

[Afghanistan not lacking explosives—one big stockpile of ordnance left from prior conflicts]

How much are these technologies helping to reduce the deadly bombs? No one can say for sure, but one thing is certain: Even as the IED attacks have dropped off precipitously in Iraq, they are surging in Afghanistan. According to figures provided by the Pentagon's Joint Improvised Explosive Device Defeat Organization, **in September of this year there were only 215 IED incidents in Iraq, down from a staggering 1,579 in September of two years ago.** Also telling, **slightly over half of those IEDs were spotted and cleared before they went off, and the vast majority of the remaining attacks were ineffective,** meaning no one was killed or injured.

In Afghanistan, it's the opposite. There were 860 IED attacks in September, up from 278 in September of two years ago. Those IEDs killed 37 coalition forces, and injured another 285. Making matters worse, **many of the counter-technologies developed for Iraq—such as devices that jam the cell phone signals commonly used to detonate explosives—are almost useless in Afghanistan, where insurgents have tended to prefer hard-wired bombs because of the lack of cell phone coverage.**

One thing Afghanistan is not lacking is an endless supply of explosives that can be used to make IEDs. "Afghanistan, if you look back at the history of who was here, there is a lot of Russian ordnance that was left behind," says Airman Rileigh Woodward, who works with the U.S. Air Force Explosive Ordnance Disposal unit in Afghanistan. **"The country of Afghanistan itself is one big stockpile of ordnance left behind from prior conflicts."**

[Often difficult for companies with good technologies to get fair hearing in the Pentagon]

Like in Iraq, the Pentagon has deployed to Afghanistan a wide array of technologies, from heavily armored vehicles, like the Mine Resistant Ambush Protected vehicle, to bomb-clearing robots, like the PackBot, produced by iRobot. "We get postcards that say: 'You saved lives today,'" says Joe Dyer, who heads iRobot's government division.

The Defense Department has also invested in a variety of sensors placed on manned aircraft and drones, including technologies that are designed to spot subtle changes in the landscape that could indicate that an IED has been placed. Rather than just real-time video, **these aircraft fly over an area multiple times, and then use computer programs to sift through the data to identify possible explosives.** Which sensors and technologies have been deployed, or used successfully, is unclear; the Pentagon won't discuss specifics.

But getting emerging technologies from the laboratory to the battlefield has proved a challenge, and there are some counter-IED systems that haven't yet been deployed. Ed Timperlake, a former Pentagon official who worked in the Defense Department's

International Technology Security Office, says **it's often hard for companies with good technologies to get a fair hearing in the Pentagon.** "People who migrate out [of the Pentagon] reach back to who they know," he says.

Are any of these technologies the silver bullet solution? "In the whole world of counter-IED technology, people gravitate to what I call their pet rock," says one military officer. "**People fall in love with a certain technology,** and that particular technology gains a lot of traction." **What's really needed,** the officer says, **is an array of technologies.**

[Navigating Pentagon bureaucracy fraught with infighting, atmosphere of secrecy]

Despite the urgency and billions of dollars directed at countering IEDs, navigating the Pentagon bureaucracy to try to get new technologies to the field is fraught with infighting and an atmosphere of secrecy. Last month, Applied Energetics, a Tucson-based company involved in counter-IED work, **paid more than \$6 million to shareholders who alleged in a class action suit that the firm purposely withheld information about setbacks to its technology,** which used electro-static discharges—or lightning bolts—to neutralize IEDs. During development, company officials at Applied Energetics, which was previously known as Ionatron, cited government secrecy as the reason they weren't able to tell investors more about the company's progress.

Applied Energetics' technology has not yet been deployed, and neither has a similar system developed by the Anderson, Indiana-based Xtreme Alternative Defense Systems. Pete Bitar, president of Xtreme Alternative Defense Systems, says he delivered 15 of his company's IED-zapping devices to the military, though it's unclear—after all the effort and funding—whether they'll ever be used. Despite what he says were successful military tests, Bitar's been turned down for more funding. **The Pentagon invested \$5 million over five years for the company to develop the bomb zapping technology.** "Yet none of it," says Bitar, "has been fielded."

The foregoing is Article No. 6 (TR410A06) in the [Terrorism Open Source Intelligence Report](#) (TOSIR), No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isincreports@mindspring.com).

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7. "Afghan Roadside Bombs a New Priority for U.S.," by Walter Pincus, [Washington Post](#), 15 November 2009 (<http://www.washingtonpost.com>). [KBTTBombs, KBTSAfghanGW, KBTSIraqGW] *We quote:*

Defense Secretary Robert M. Gates is creating a department-wide task force to focus on ways to counter the roadside bombs that have caused 80 percent of U.S. casualties in Afghanistan.

[Concern whether JIEDDO, intelligence, military properly integrated, sufficiently flexible]

The challenges are different from those in Iraq, Gates told reporters Thursday before a visit to a Wisconsin factory that is producing a rugged new armored vehicle for use in Afghanistan. He said **most of the improvised explosive devices, or IEDs, in Iraq are**

based mainly on artillery shells and are triggered electronically. Those in Afghanistan, he said, are made primarily from fertilizers such as ammonium nitrate, with mines as detonators.

He also pointed out that **Afghanistan’s terrain is different, its road system is different—streets running from paved to unpaved to nonexistent—and the bomb builders’ networks are structured differently than in Iraq.** “I have decided I need to focus my attention on this problem,” he said.

Gates has recently expressed concern about whether the Pentagon groups working on the threat—the Joint Improvised Explosive Device Defeat Organization (JIEDDO), the intelligence community, and the commanders in the field—are properly integrated and sufficiently flexible. JIEDDO is the multibillion-dollar agency set up to lead and coordinate the Defense Department’s efforts against roadside bombs.

Two weeks ago, however, **the Government Accountability Office (GAO) criticized the agency for not having a database that includes both its own projects and those being carried out independently by the individual services.** In addition, the GAO said, **JIEDDO “lacks a means as well as reliable data to gauge the effectiveness of its counter-IED efforts,”** according to its 29 October report to the House Armed Services subcommittee on oversight and investigations.

To head the new task force, Gates chose Ashton B. Carter, the undersecretary of defense for acquisition, technology, and logistics, and Lieutenant General John M. “Jay” Paxton, the Joint Staff’s director of operations. Calling this one of his top priorities for the next six months, Gates said he would meet monthly with the group.

[Gates recommended looking back at Soviet Union’s experience with IEDs in Afghanistan]

The secretary also offered some ideas of his own. **Referring to a recent seizure in Afghanistan of a big cache of illegal ammonium nitrate, he said that the law has not been enforced up to now** and that the goal is to get such substances under control. He added, **“If we have to pay for some of it, I’m open to that.”**

Gates also recommended looking back to the 1980s, when some of the Afghans who are fighting today as Taliban insurgents were, with CIA assistance, using similar IEDs against the invading Soviet Union. “So let’s go back and look at the playbook that they used against the Soviets to see if there’s something that we could learn in terms of adapting our tactics, techniques and procedures,” he said.

At [a recent] House subcommittee hearing, Lieutenant General Thomas F. Metz, director of JIEDDO, said that **“the IED has now replaced direct-fire weapons as the enemy’s weapon of choice.”** Asked if Iran is supplying the Afghan insurgents, Metz said that because the directional-attack bombs that Iran makes are particularly deadly, U.S. forces in Afghanistan have looked closely to see where such weapons have come from. **“Fortunately, we’ve seen only homemade platters with directional charges, none as sophisticated as ones we saw in Iraq,”** he said.

The foregoing is Article No. 7 (TR410A07) in the **Terrorism Open Source Intelligence Report (TOSIR)**, No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isincreports@mindspring.com).

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8. “Rethinking IED Strategies: From Iraq to Afghanistan,” by Commander John Moulton, U.S. Navy, Military Review (U.S. Army Combined Arms Center), July-August 2009.

[KBTTBombs, KBTZTactics, KBTSIraqGW, KBTIThery] Commander Moulton was the J-5 for Combined Joint Task Force Troy in Baghdad, Iraq. We *quote* from this article available in full at <http://usacac.army.mil/CAC2/MilitaryReview/repository/MREditions2009-English.xml#July-August>:

Improvised explosive devices (IEDs) have been emblematic of the insurgency in Iraq. . . . Coalition forces cannot out-armor or out-engineer the problem, although an IED’s physical effects can be, and have been, mitigated. The insurgency in Iraq has been a complex problem, the taming of which requires adaptive, comprehensive effort. **We will not defeat the IED problem with a single solution. Nor will we likely ever solve it in the literal sense.** However, if we counter IED attacks as part of an overarching counterinsurgency (COIN) strategy, **we can reduce an insurgency’s ability to gain strategic advantages with IEDs.**

[The IED has the same effect as a precision guided weapon]

The IED has become a widely used weapon for insurgents in Iraq for one reason: it works. The IED’s effectiveness as a weapon system largely derives from **its ability to detonate in close proximity to a target. The enemy in Iraq does this either by using a suicide operative to initiate the IED or by having its victim or victims unknowingly set off the device. Examples of victim-initiated attacks** include using the weight of the victim or vehicle to trigger an electric switch, using landmines to initiate an IED, or using passive infrared systems that detect movement. **The IED detonates close to its target and at a predetermined angle.**

The IED has the same effect as a precision-guided weapon. While victim-initiated IED detonations depend on victims taking actions to initiate them, **insurgents have reduced the element of chance by including separate arming and firing systems and by using command initiation systems where a triggerman arms or fires the IED. Typical methods used in Iraq** include powering the IED via a copper wire previously laid out between the device and the triggerman, or using commercially available technology such as long-range, cordless telephones or electronic key fobs to transmit an arming or firing signal. **By using these methods, the IED’s triggerman can physically distance himself from the scene of the attack without reducing its effectiveness.**

In this manner, **IEDs can incorporate the weapon system concept of standoff.** By gaining distance, **the triggerman limits his chances of death or injury** when he detonates the IED, **reduces his odds of capture by being further away from his victims, and facilitates his escape.**

[Insurgents face a low barrier of entry to build, stockpile, and use IEDs]

The use of commercially available products in IEDs in Iraq is extensive. By using commercial products, insurgents ingeniously take advantage of the creative power of a global market-based economy. **Rather than having to research, design, test, and**

manufacture their own initiation systems, insurgents rely on the power of consumer demand to entice companies and their research labs to develop and produce smaller, lighter, longer range, less expensive, and increasingly reliable electronic items, which they can use in their IEDs.

These constant technical improvements also benefit the insurgent by making it difficult for counter-IED (CIED) forces to adapt. If insurgents find one of their systems is susceptible to IED countermeasures, the multitude of commercially available systems readily provides them with options for switching to other systems. **Effective IED countermeasures against one initiation system often result in insurgents switching to other means of initiation to continue their IED campaign.**

The dual-use nature of these commercial products also enables the insurgent to hide them in plain sight. The insurgent can use legitimate electronics shops to order and stockpile components prior to assembly. The devices' actual signals, transmitted among other signals on the electromagnetic spectrum, do not distinguish themselves as nefarious in a routine sea of benign transmissions from other devices.

Besides the arming and firing systems, an IED also requires an initiator and explosive component. However, due to the amount of military ordnance throughout Iraq, **explosive components are readily available**, and the region has a long history of trade practices that are beyond the central government's control. **Some insurgents have the ability to manufacture homemade explosives. Further benefiting the insurgents is the fact that the ordnance in an IED does not have to be pristine or stored in dry conditions** because insurgents do not drop IEDs from an aircraft or shoot them out of a gun tube.

The ability to use commercially available items and the prevalence of explosives means that insurgents face a low barrier of entry to build, stockpile, and use IEDs. While external support and state sponsorship can help insurgent groups, they are not prerequisites for waging an IED campaign in Iraq. From this perspective, a strategy based on effectively controlling Iraq's borders, akin to the U.S. government's war on drugs, might reduce IED attacks but would not preclude them.

[Using COIN principles for CIED will thwart insurgents' ability to use IEDs strategically]

A unique aspect of the Iraqi insurgency is that numerous insurgent groups with conflicting goals have chosen to wage their insurgencies via an IED campaign. Due to the conflicting nature of many of these groups' goals, **it is highly unlikely that they have chosen to use IEDs as part of an overarching strategic campaign.** Do insurgent groups choose IEDs for strategic reasons or merely because they are the most feasible means to reliably attack coalition forces? Regardless of why insurgents choose IEDs, **they gain strategic advantages by using them.** If insurgents find one of their systems is susceptible to IED countermeasures, the multitude of commercially available systems readily provides them with options for switching to other systems. . . .

The IED is an unparalleled strategic weapon for insurgents to employ against a stronger military force. The availability of explosives and commercial technology means that the insurgents can fabricate it locally without large-scale financial or logistic support. **Its improvised nature means that insurgents can readily adapt it to overcome countermeasures.** The IED enables small insurgent cells to cause casualties in

large and powerful military formations and to reduce their risk by incorporating standoff. **It keeps coalition forces from applying their advantages in maneuver and firepower, and forces them to adopt expensive force protection measures that increasingly isolate them from the populace whose support they seek.**

. . . [Further, the IED] enables insurgents to take free advantage of the media to vividly portray the counterinsurgents as unable to establish order and security, and this helps erode popular support for the counterinsurgency. Worse, **many IED attributes and characteristics cause leaders to focus on reducing IED attacks and casualties at the expense of the COIN effort.** However, **if we apply proven COIN principles to the CIED effort, we can thwart the insurgents' ability to use IEDs strategically.** . . .

[CIED leaders should conduct own critical analyses—seek to improve COIN effectiveness]

While the United States spent \$3.63 billion in 2006 on a largely technical, engineering-based CIED effort, the level of IED attacks throughout Iraq did not begin to decrease until July 2007. These attacks continued to decline from 100 attacks a day to approximately 60. In order to sustain this downward trend, coalition and Iraqi leaders must examine the situation to determine the cause or causes of this decline.

However, **unless we can find a clear relationship between the decline in IED attacks and specific coalition CIED operations or techniques, tactics, and procedures (TTP), it would be prudent for coalition CIED leaders to conduct their own critical analysis** and not shy away from innovative TTP or organizational structures that challenge existing doctrine. Thus, **rather than focusing on ways to prevent an IED from detonating or mitigating its explosive effects, the Army should seek to improve the CIED force's COIN effectiveness.**

[Critical to sift for relevant information by focusing reports on changes and patterns]

. . . [We need] to change how CIED forces in Iraq provide information on their operations to their chain of command and to other units. Currently, **CIED reports in Iraq focus on the what, when, where, and how of an IED attack.** Unfortunately, **this generates hundreds of reports daily** with photos and information on coalition force actions before, during, and after the attack, and on the type of IED that the enemy employed. **What is largely missing from this deluge is the “who” and “why” that might enable staffs to turn the information into intelligence.** By remembering the purpose of such reports and using information technology systems to better convey this information, military leaders will better understand IED networks and the effects of operations against them.

Reports should emphasize the IED network. While understanding coalition force mistakes may help mitigate future attacks, this should not be the focus of reports: such knowledge does not directly help the COIN effort. **By focusing on coalition and insurgent TTP in comparison to previous attacks, we can develop a larger picture of the IED network.** EOD [Explosive Ordnance Disposal] Mobile Unit 2 used this method with some success to profile IED networks. However, it was not adopted theater-wide.

While this emphasis on patterns of events can make reports more useful, if such information remains buried, we cannot act on it effectively. **To help separate the wheat**

from the chaff, we must determine where value is added to IED reports during their processing up the chain of command.

. . . Because of his day-to-day missions rendering IEDs harmless, **the non-commissioned or junior officer EOD team leader is best suited to recognize similarities and trends in IED attacks in his area of operations.** On the other hand, because his focus is local and he is tactically oriented, the next higher level in the chain of command may be in a better position to recognize any extension of the patterns to other areas of operation. **Team leaders can sift for relevant information by focusing their reports on the changes and patterns they see, thus preventing those higher in the chain of command from receiving too much extraneous information and enabling them to analyze why these patterns are emerging.**

Higher echelons add value by analysis and pattern identification. Thus, posting information on the Web displays pertinent information more effectively and enables all users with appropriate access to it to view the information faster than via e-mail, where briefing cycles drive deadlines. Furthermore, Websites enable units preparing to deploy to the same area and other units at the same echelon to access the information much sooner. . . . **[Junior] leaders** who are more information technology-savvy than senior leaders **should develop reporting formats and innovative ways to disseminate information about IEDs to the larger COIN force.**

[Treating IEDs as information source could turn insurgents' strength into vulnerability]

. . . Coalition forces should also change how coalition leaders view IEDs. Currently leaders see IEDs from a conventional warfare perspective—that is, as impediments to maneuver. **By realizing the IED's inherently improvised nature, counterinsurgent leaders will see that the IED itself is a valuable source of information. It can provide greater understanding of the insurgency and help us discover new ways to defeat it.**

. . . **Coalition forces will be able to reap intelligence on IED networks through forensic analysis of the IEDs themselves—if they view IEDs as murder weapons left at the scene of a crime rather than landmines placed to inhibit maneuver.** Furthermore, **using forensic evidence to seek convictions at the Iraq Central Criminal Court can bolster the Iraqi judicial system. . . .**

The tactical situation will not always facilitate recovering an IED and treating the surrounding area as a crime scene, but **once leaders gain actionable intelligence from EOD teams and forensic evidence, they will become aware of the benefits of exploiting IEDs,** as opposed to simply detonating them in place as the preferred course of action.

Currently, ad hoc organizations called “weapons intelligence teams” gather forensic evidence about the insurgent IED campaign in Iraq. These teams, and their command and control structure, fall under Combined Joint Task Force Troy, and consist of EOD technicians, combat arms soldiers, and intelligence personnel trained to gather forensic evidence. However, **we are not using them as effectively as we could be due to their need for additional security and because they can exploit an area only after an EOD team has cleared it.**

Assigning an intelligence specialist to each EOD team to collect forensic evidence would produce numerous benefits. All EOD responses could then include forensic information, and instead of EOD and weapons intelligence teams simultaneously reporting on the same events, **intelligence specialists could help write IED reports, and EOD technicians and combat arms soldiers could return** to more gainful employment in their specialties.

Exploiting IEDs and attack scenes will lead to more evidence and intelligence. This in turn will enable us to identify more insurgent IED cells and link them to attacks using evidence that can result in criminal convictions. **By regarding the IED itself as a source of information, coalition force leaders will be able to turn the insurgents' most relied upon critical strength into a critical vulnerability.**

[Crucial to enable indigenous security forces to protect their fellow citizens from IEDs]

We must enable indigenous security forces to assume responsibility for the CIED effort. The insurgents attack coalition forces with IEDs, but they also use them to **attack hospitals, schools, Iraqi officials, markets, and religious sites and gatherings** such as the Golden Mosque in Samarra and the Shia Ashura celebration.

Such attacks will not end once coalition forces withdraw. . . . **Enabling security forces to protect their fellow citizens by prosecuting IED-makers and gathering evidence that can lead to criminal convictions would be a great advantage for the counterinsurgency. . . .**

[Engendering success requires changing mind-set—not relying on technological solutions]

My three recommendations—[1] establishing unit Websites to share IED reports focused on IED networks, [2] restructuring the weapons intelligence teams, and [3] adequately resourcing bomb disposal partnership programs—all focus on changing our approach to problems, rather than relying on engineering or technological solutions, which have narrower applications.

While these recommendations have grown from experience in Iraq, **they also apply to other IED campaigns against counterinsurgent power,** for example, Afghanistan. **And Afghanistan will not likely be the last place where the United States will confront an insurgent IED campaign.** An overarching COIN strategy requires a counter-IED strategy to turn the enemy's use of IEDs into a vulnerability.

The foregoing is Article No. 8 (TR410A08) in the **Terrorism Open Source Intelligence Report** (TOSIR), No. 410, 19 November 2009, prepared by Interaction Systems Incorporated (isincreports@mindspring.com).

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