



Red Diamond

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INSIDE THIS ISSUE

Train the Trainer COI.....	2
PMESII-PT is Alive.....	2
Houthi Rebels - Yemen	4
Murders in France	6
Tehrik-e-Taliban Pakistan .	8
Indonesian Bombings.....	11
Counterfire/battery TTP ...	12
Private Armies	15
What is ERA?	18
Update: Syria	20
WEG Highlight.....	21
Monthly wrap-up of CTID daily updates	23

Red Diamond is produced monthly by the Threat Integration Directorate of the TRADOC G2 Intelligence Support Activity (TRISA). Send suggestions and feedback to Ms. Penny Mellies (penny.l.mellies.civ@mail.mil).



DIRECTOR'S CORNER

by Jon Cleaves, CTID Director

As we wind down the work on the last of our core publications, TC 7-100.3 *Irregular Opposing Force*, we will begin a new era where we are able to expand our capacity. The core fundamentals of placing operational environment (OE) conditions in training will be set by the TC 7-100 series: TC 7-100 *Hybrid Threat*, TC 7-100.1 *OPFOR Operations*, TC 7-100.2 *OPFOR Tactics*, TC 7-101 *Exercise Design*, TC 7-100.4 *OPFOR Organization Guide*, and the *Worldwide Equipment Guide (WEG)*. This means we can begin increasing the number of customized or specialty publications we can create for particular needs of the training audience. And that means we need to hear from you. Our directorate is your gateway to OE training conditions for all units, components, echelons, and venues. It does not matter if you are in the National Guard or an instructor at a school or building an STX lane at your home station, the crafting of OE conditions for your training audience is our mission. If you want a product on a particular threat, a threat TTP, how to represent one or more of the operational variables in training—anything that has to do with the space between an Army task and its performance measures—please ask. We have a plan for what we are going to do next, but we will alter that plan in a moment to address a specific need identified by those whom we serve.

Tell us how we can help.

Email CTID at

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Jon

ANNUAL HYBRID THREAT “TRAIN THE TRAINER” COURSE OF INSTRUCTION

Reserve your spot now!

The Threat Integration Directorate from TRADOC G-2 Intelligence Support Activity (TRISA) will host its annual Hybrid Threat “Train the Trainer” (TTT) Course of Instruction (COI) from 17-21 September 2012 at the Mission Training Complex, Leavenworth, Kansas. This week-long course covers Hybrid Threat and associated opposing force (OPFOR) application as depicted in the new Army TC 7-100 series (e.g. organization, equipment, and tactics). The intent of this COI is to train a limited number of attendees who will return to their installation and/or command to teach the material to others.

The training consists of a 40 hour block of instruction including lecture and practical exercises designed to train the trainer. The class content has been updated with information from TC 7-100, *Hybrid Threat* and the recently approved Army TC 7-100.2 *Opposing Force Tactics* which will include animated video of selected OPFOR tactics. In addition, the latest draft of TC 7-100.3, *Irregular Opposing Force* will also be included. This new TC provides tactical examples of how the irregular OPFOR (e.g., insurgents, guerrillas, and/or criminals) can act to achieve desired effects using conventional-like tactics and techniques, and/or terrorism.

Participating organizations are responsible for funding their attendees. Attendees will pay their own TDY costs. Travel arrangements must be made by each individual as well as their transportation from and to the Kansas City International Airport and between the lodging and conference site.

Clearances are not required. Contractors and foreign military students are welcome to attend. All interested participants or organizations are requested to submit names as soon as possible but no later than 1 August 2012. Seating is very limited. Students will be provided all necessary course material. This also includes our latest approved and draft OPFOR publications. ♦

For those interested in attending or reserving seats for attendees from your organization, please email our course administrator as soon as possible at patrick.madden@us.army.mil or call 913-684-7997 (DSN 552).

PMESII-PT IS ALIVE AND WELL

by Dr. Donald L. Madill

This article is intended for anyone who may have seen a notice about PMESII-PT in “Army Doctrinal Term Changes – New & Rescinded IAW Publications Listed (V.03, 27 MAR 2012)” posted by the Combined Arms Doctrine Directorate (CADD) on its milSuite/milBook site at <https://www.milsuite.mil/book/groups/army-marine-corps-terminology>. Although CADD removed that list after 2 days, several people have seen it and possibly downloaded it and shared it with others, and the original list may therefore still be in circulation. The purpose of this article is to put an end to any

misunderstandings that may have resulted from errors regarding the status of PMESII-PT in Army doctrine.

Do Not Be Misled

Unfortunately, this list CADD posted on 27 Mar 12 contained a misleading entry listing PMESII-PT as a “Doctrinal Term” and indicating that it was “Rescinded” and “Removed from ADRP 1-02 and Army & Marine Corps Database.” That gave the impression that the

PMESII-PT IS ALIVE AND WELL *(continued)*

Army no longer uses this memory aid for the operational variables that make up an operational environment (OE), which is not the case at all. ADRP 1-02, *Operational Terms and Military Symbols*, will replace FM 1-02. ADRP 1-02 (initial draft 6 Jan 12 and final draft 30 Mar 12) does list PMESII-PT under Acronyms and Abbreviations (where it belongs): “**PMESII-PT** political, military, economic, social, information, infrastructure, physical environment, time (operational variables) (Army).” It just does not list it under Operational Terms (where it does not belong).

Treatment of PMESII-PT should be the same as METT-TC. In FM 1-02 (21 Sep 04), METT-TC was listed under both “Operational Terms” and “Acronyms.” In ADRP 1-02, METT-TC was dropped from the Terms section (where it never really belonged in the first place), but is still listed in the Acronyms section, as is PMESII-PT. PMESII-PT was never in the Terms section of ADRP 1-02 or its predecessor FM 1-02 to start with; so it has not really been “removed.” Since the list of “Army Doctrinal Term Changes” did not include METT-TC, which was deleted from the Terms section, it should not have listed PMESII-PT either, since PMESII-PT was never in the Terms section.

Terminologist comments in the 27 Mar 12 list also stated, “‘PMESII’ without the ‘PT’ is a valid joint term,” which could lead Army planners to believe that they are not supposed to use PMESII-PT, but only PMESII—which is incorrect. JP 1-02 does not list PMESII as a “term” either, but only lists it under Abbreviations and Acronyms. JP 3-0 describes a “systems perspective” of looking at an OE in terms of PMESII “and other systems.” Army doctrine, while trying to remain compatible with the joint perspective, has since 2008 added physical environment and time (covered under “other” in JP 3-0) to form the Army's standard framework of operational variables, for which PMESII-PT is the memory aid.

When TRISA-Threats called these problems to CADD’s attention on 29 Mar 12, CADD immediately sought to correct these errors by replacing its 27 Mar list with “Army Doctrinal Term Changes – ONLY RESCINDED TERMS – IAW Publications Listed (V.04.1, 29 MAR 2012)” and removed the original list from its milSuite/milBook site. The corrected list no longer lists PMESII-PT as a rescinded term. However, CADD did not include any explanatory note to correct possible misunderstanding of the status of PMESII-PT resulting from the erroneous list.

PMESII-PT in Current Army Doctrine

PMESII-PT is alive and well in Army doctrine. ADP 3-0, *Unified Land Operations* (10 Oct 11) states: “Army leaders plan, prepare, execute, and assess operations by analyzing the operational environment in terms of the operational variables and mission variables. The operational variables consist of political, military, economic, social, information, infrastructure, physical environment, and time (known as PMESII-PT).”

ADRP 3-0 (about to be published) expands on the doctrinal statements in ADP 3-0 regarding the PMESII-PT framework and its relationship with METT-TC as follows:

Operational and Mission Variables

An operational environment for each operation differs and evolves as each operation progresses. Army leaders use operational variables to analyze and understand the specific operational environment in which they are conducting operations. They use mission variables to focus on specific elements of the operational environment during mission analysis.

Operational Variables

Military planners describe an operational environment in terms of operational variables. Operational variables are those aspects of the operational environment, both military and nonmilitary, that may differ from one operational area to another and affect operations. Operational variables describe not only the military aspects of an operational environment but also the population’s influence on it. Army planners analyze an operational environment in terms of eight interrelated operational variables: political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT). (See ADRP 5-0 for a more detailed discussion of operational variables.) As soon as a commander and staff have an indication of where their unit is likely to deploy, they begin analysis of the operational variables associated with that location. They continue to refine and update that analysis even after receiving a specific mission and throughout the course of the ensuing operation.

PMESII-PT IS ALIVE AND WELL *(continued)*

Mission Variables

Upon receipt of a warning order or mission, Army leaders filter relevant information categorized by the operational variables into the categories of the mission variables used during mission analysis. They use the mission variables to refine their understanding of the situation. The mission variables consist of mission, enemy, terrain and weather, troops and support available, time available, and civil considerations (METT-TC). Incorporating the analysis of the operational variables with METT-TC ensures Army leaders' consideration of the best available relevant information about conditions that pertain to the mission. (See ADRP 5-0 for a more detailed discussion of mission variables.)

This portion of ADRP 3-0 was written by TRISA-Threats, coordinated with CADD, and approved at the ADRP 3-0 Council of Colonels in Nov 2011.

Bottom Line

PMESII-PT remains the memory aid for the operational variables the Army uses to analyze an OE, just as METT-TC serves as the memory aid for the mission variables used during mission analysis. ADRP 1-02 now lists both those memory aids under Acronyms and Abbreviations rather than under Operational Terms. ♦

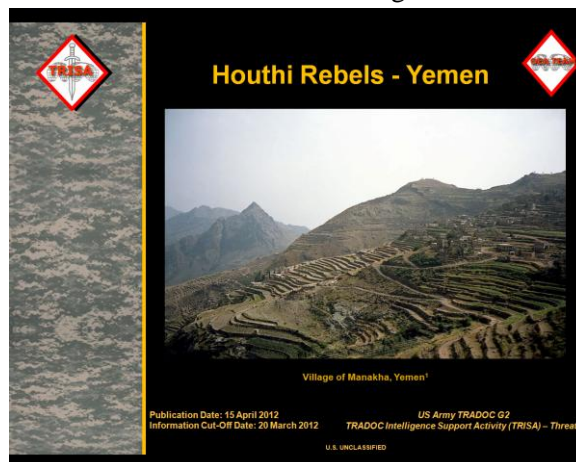
HOUTHI REBELS—YEMEN

by Rick Burns, OEA Team

The ongoing [conflict](#) between the Houthis, a tribe in northern Yemen, and the Yemeni national government is as much economic as it is religious. Northern Yemen's years of economic neglect and marginalization coalesced the Houthi movement around Zaydi revivalism. Zaydism is a Shia Islamic sect named for Zayd, great great grandson of Muhammad. Zaydis believe Zayd to be the fifth Imam and hold to the Shia claim that the Imam has to be a Hashemite, or direct descendant of Muhammad. Zaydism came to Yemen in the ninth century when leaders in what is now northern Yemen asked Zaydi scholar al-Hadi to mediate tribal disputes. Yemeni Zaydism developed in relative isolation and provided the predominate political and theological thought and leadership in northern Yemen until the 1962 Republican Revolution. An enduring tenet of strict Zaydism is the idea that followers have a right and responsibility to overthrow corrupt governments or a government led by someone other than a Hashemite Zaydi. Due in part to this Zaydi belief, the Yemeni government has viewed the Zaydis, particularly the Zaydi Hashemites, as a potential threat to its legitimacy, causing an uneasy accommodation policy on both sides prior to the outbreak of violence in 2004.

Decades of economic development neglect and marginalization since the 1962 Republican Revolution created a population of dissatisfied, unemployed, and disenfranchised people in northern Yemen. Inevitably, this sense of disenfranchisement and neglect led to nostalgia for better times when the northern Yemen Zaydis prevailed in both religious and political power. Beginning in the 1990s, Hussein al Din al Houthi formed the paramilitary and political group called the Believing Youth (*al-Shabab al-Mumin*) with a primary goal of reviving Zaydi Islam. The Believing Youth became a rallying point for many who were frustrated by poverty, marginalization, and lack of opportunity.

Despite serving in Parliament as a member of the pro-government al Haqq political party from 1993-1997, and numerous proclamations of loyalty to the government, Hussein's desire for a revival of Zaydism in northern Yemen put the Houthis on a path of inevitable clash with the national government. Strict adherence to Zaydism required that Muslims be led by a Hashemite Zaydi. President Saleh, while a Zaydi, was not a direct descendant of Muhammad. Additionally, U.S. support of



HOUTHI REBELS—YEMEN *(continued)*

the Yemeni government's efforts to oust al-Qaeda's influence and presence in Yemen also became a rallying call for protests against the national government to eliminate foreign influence in Yemen.

Two Houthi-supported protests created the impetus for almost constant violent clashes since 2004 between the Houthi rebels and the national government. In January 2004, government security forces arrested 600 protesters who, in the middle of an after Friday prayers speech by President Saleh in the Houthi stronghold of Saada, shouted "God is great! Death to America! Death to Israel! Curse the Jews! Victory for Islam!" This became the rallying slogan for the developing Houthi movement. On 18 June 2004, government security forces arrested 640 protesters for chanting this slogan outside the Grand Mosque in the capital city of Saana. In response, the government issued a warrant for the arrest of Hussein as the leader of the protesters. Government forces, attempting to capture him, killed Hussein on 8 September 2004 in Saada Province. These events ushered in a fundamental shift in the relationship between the Houthi rebels and the national government that resulted in momentary ceasefires followed almost immediately by renewed violence.

Years of violent confrontation and inability to bring about a lasting peace bred mistrust on both sides. The Houthi rebels maintained total control of Saada and Amran provinces and significant influence over al Jawf, Hajjah, al Hudaydah, and al Mahwit provinces. Government attempts to wrest control of northern Yemen from the Houthi rebels resulted in an estimated 300,000 displaced northern Yemeni and thousands of deaths on both sides of the conflict. Each disrupted and failed peace accord resulted in an ever-deepening wariness on both sides. Between 2004 and 2011 there were at least seven identifiable outbreaks of violence lasting months between the Houthi rebels and government forces. The government continued to adopt a heavy-handed policy toward the Houthi rebels, further preventing long-term solutions. Saudi Arabian support for the national government and Iranian support for the Houthi rebels further eroded trust. The standoff seemed devoid of solutions.

In 2011, the dynamics changed significantly in Yemen and opened up new opportunities for the Houthi rebels. In January 2011, the Yemeni response to the Arab Spring resulted in thousands of pro-democracy protesters

in the capital city of Saana. On 3 February 2011, 20,000 pro-democracy protesters demonstrated in Saana demanding regime change and democratic elections. Houthi rebel leader Abdul Malik al-Houthi proclaimed support for the demonstrators on 27 February. In March, Houthi rebels moved into and secured the capital city of Saana and within a week installed a Saada Provincial governor, independent of the Yemeni government. In November, Houthi rebels captured Khulan Ash Sharaf, gaining access to the strategically important Midi seaport. On 23 November, after vacillating and posturing, President Saleh resigned and transferred power to his deputy Abed Raboo Mansour.

The Houthi rebels are taking advantage of the opportunities presented to them by the political disruption in Yemen. The government has been forced to move security forces to the capital city of Saana in an attempt to give the perception of control and to blunt further anti-government protests. This has opened the way for the Houthi rebels to consolidate and secure northern Yemen in the absence of a national threat. Houthis, with suspected support from the

Iranians, are increasing territorial hold on northern Yemen with the heaviest resistance from the Saudi Arabian-supported Salafist Sunnis. In Saada, the Houthi stronghold, there is evidence that citizens are living under strict, controlling, and heavy-handed enforcement of rules related to discrimination against women, non-Zaydis, anti-Houthis, and other ethnic groups.

The Houthis, to date, have not expressed an interest in playing a political role in national politics. The Houthis have not formed a political party, choosing instead to expand military strength and control in northern Yemen. Houthis were present, however, at the forming of the Ummah party. The Ummah party was formed to eliminate foreign influence in Yemeni politics, a basic tenet espoused by the Houthi rebels.

For the moment, the Houthi rebels are content to focus attention on establishing control of northern Yemen. Once Houthi control of northern Yemen is militarily secured, focus will, inevitably, have to turn to the political aspects of economic development funding and public services infrastructure, bringing the Houthis into national politics.

The volatile nature of Yemeni politics points to many uncertainties, all dependent on daily decisions made by

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HOUTHI REBELS—YEMEN *(continued)*

any number of Yemeni groups. Four ideas, however, are certain to drive future outcomes:

1. Houthis, in response to the weakness of the transitional government, will continue to militarily secure as much territory as possible in northern Yemen, to the exclusion of any real participation in national politics in the short term.
2. Until Houthis are given a degree of national political autonomy in northern Yemen and economic attention, they will continue to resist participation in national politics, using Zaydism as a rallying point.
3. Since 2004 no ceasefire has held, pointing to the need for a trusted intermediary to negotiate conditions for peaceful resolution of differences. Saudi Arabian and Iranian meddling will need to

be considered when determining who will attempt to broker a peace agreement.

4. The Houthi rebels will need to be an integral part of a united Yemen.

The Houthi movement is an example of a perennial problem faced by many countries—an economically and politically marginalized group seeking attention through violent means. Many of these governments choose to meet violence with violence without real regard for root causes, which leads to a cycle of violent responses. Since the U.S. will, inevitably, find itself enmeshed in conflicts of this nature, an understanding of the historical, cultural, and ethnic complexity of these relationships is critical for an accurate analysis of the current operational environment. It is, therefore, essential that these kinds of environmental challenges and complexities be included in both training scenarios and analysis. ♦

MURDERS IN FRANCE

Lone actor Mohammed Merah strikes in France

by Raines Warford, OEA Team

The recent [terror attacks in France](#) offer real-world events that can be incorporated into training scenarios to provide more challenging training. In three attacks, each four days apart, a lone gunman calmly and deliberately killed French soldiers and then Jewish children and a Rabbi, and escaped each scene on a motor scooter. The principal suspects for these murders initially were three former French paratroopers who were previously dismissed from the army for alleged neo-Nazi beliefs. The murderer turned out to be Mohammed Merah, an unemployed Frenchman of Algerian descent with a history of petty crimes and family connections to Islamist radicals. In a more than 30-hour standoff with police, Merah claimed to be an al-Qaeda member and boasted that he “brought France to its knees.” Merah’s case highlights the challenges and complexity presented by lone actors who commit acts of terror.



Mohammed Merah’s actions were similar to, yet distinctly different from those of Anders Breivik’s July 2011 attacks in Norway and Nordine Amrani’s December 2011 rampage in Belgium (see the OEA team Threat Reports “[Anders Behring Breivik - Norwegian Lone Wolf Bomber](#)” and “[Nordine Amrani - Mass Murder in Belgium](#)”). Each of these men appears to have been a lone actor. All three were able to acquire

firearms in nations where firearms are heavily restricted. All three murdered innocent people in mass or serial killings. Each man’s motivations was different, but these three men’s actions highlight what could be a trend in Europe – lone actors perpetrating acts of violence.

Mohammed Merah’s first attack was on 11 March 2012. French paratrooper staff sergeant Imad Ibn-Ziaten, identifying himself as a soldier, had posted an online ad in an attempt to sell his motorcycle. On 11 March, he went to meet a person who responded to the ad. He was found dead next to his motorcycle, shot in the head with

MURDERS IN FRANCE *(continued)*

a .45 caliber pistol, behind the Chateau De l'Hers school in the city of Toulouse. French police later traced Internet communications related to the ad to an email account used by Merah's family.

Four days later, three paratroopers were waiting in line at a cash machine outside a shopping mall in the city of Montauban when Mohammed Merah opened fire with a .45 caliber pistol. Corporal Abel Chennouf and Private Mohamed Legouad, both of North African origin, were killed and Corporal Loic Liber, from the French overseas region of Guadeloupe, was left in a coma. Witnesses said Merah was calm, pausing to change the magazine of his pistol and turning over one of the wounded soldiers, who was trying to crawl away, before shooting him three more times. Merah wore a motorcycle helmet with the visor up during the attack. In video he recorded of the incident, Merah shouted "God is great!" as he left the scene.

On 19 March, Merah struck again, this time at Ozar Hatorah Jewish school in Toulouse, killing an adult and three children. Merah again wore a motorcycle helmet, on this occasion with the visor down during the attack. He was wearing a *GoPro* video camera in a chest harness to record his actions. Norwegian mass murderer Anders Breivik recommended this camera in his online manifesto, stating, "This extremely small and lightweight field camera is used to document your operation."

After the third attack, media and politicians speculated the murders were motivated by racism. French President Nicolas Sarkozy stated, "Of course, by attacking children and a teacher who were Jewish, the anti-Semitic motivation appears obvious." Sarkozy went on to say, "Regarding our soldiers, we can imagine that racism and murderous madness are in this case linked." Police began a manhunt for three former soldiers that were dismissed from the Army for alleged neo-Nazi beliefs. The neo-Nazi theory, however, was quickly proven incorrect.

At approximately 0320 hours on 21 March, police attempted to arrest Mohammed Merah at his apartment in Toulouse but were fired upon and two police officers were wounded. Police then set up a perimeter and attempted to negotiate with Merah. Merah died in a gun battle with police at his apartment after a 32-hour standoff.

During the standoff, Merah made numerous statements attesting to his affiliation with al-Qaeda. Among these were statements that he was a member of al-Qaeda, that he trained with al-Qaeda in Waziristan, and that he was given €20,000 to purchase weapons. Merah called a reporter at *France 24* news channel to claim responsibility for the murders. He told the reporter that the killings were in response to the French law banning the Islamic veil and France's participation in military operations in Afghanistan, and he said he killed Jewish children in revenge for murdered Palestinian children.

In an online posting, Jund al Khilafah [Soldiers of the Caliphate], an al-Qaeda-linked terror group in Pakistan's Federally Administered Tribal Areas, claimed credit for the attack at the Ozar Hatorah Jewish school. Though certainly not conclusive, this may support Merah's claim of al-Qaeda affiliation.

Mohammed Merah was known to French authorities . . . Like Anders Breivik and Nordine Amrani, Merah's preparations for violent attacks escaped detection.

While French media and politicians have downplayed any connection between Mohammad Merah and al-Qaeda, Merah repeatedly stated he was a member of al-Qaeda and that "brothers in Pakistan" trained and financed him. The French government confirmed that Merah was detained in Afghanistan while traveling with a group of Afghans in November 2010 and transferred to

American custody. He was questioned by Afghan intelligence and the French embassy was informed of the events. Merah was released and returned to France on his own accord on 05 December 2010. He traveled through at least eight countries on his way to Afghanistan, including Turkey, Syria, Lebanon, Jordan, Iraq, Israel, and Egypt.

Before entering Afghanistan, Mohammed Merah visited his older brother Abdelkader in Cairo. In 2008, Abdelkader was associated with a network in Brussels that was sending Belgian and French recruits to Cairo to join Islamist militants in Iraq. This network may also have connected Europeans with Islamist militants in the Afghanistan-Pakistan border region.

Merah's mother married the father of Sabri Essid. Sabri was part of a network recruiting in Toulouse for al-Qaeda in Iraq. Abdelkader was suspected of membership in this network. Sabri was arrested in Syria in 2006 at an al-Qaeda safe house for militants traveling to Iraq. It appears Merah had connections with Forsane Alizza [Knights of Pride], a radical French Muslim organization banned in February 2012. Paris security sources believe

MURDERS IN FRANCE *(continued)*

Mohammed and Abdelkader Merah were involved with “the Toulouse group,” a militant jihadist network.

While there is no definitive evidence that he received support from al-Qaeda or one of its various affiliates, Merah’s past history indicates it is likely he received assistance from an individual or group in obtaining the weapons, camera, body armor, and other items he used in the attacks. Merah was an unemployed petty criminal; he did not appear to have the ability to pay for the items on his own. He also had no apparent means of financing his travels in 2010 and 2011. Given Mohammed Merah’s familial links to international Islamist radical networks, it is likely his brother, Abdelkader, or his stepbrother, Sabri, provided him with connections that facilitated his travels in 2010 and 2011. It is reasonable to assume such connections would be capable of providing him with a terrorist organization contact.

Mohammed Merah was known to French authorities. He was sentenced 15 times for petty crimes—eight while a juvenile and seven for misdemeanors as an adult. He served 18 months in prison for purse snatching and was released in September 2009. Most recently he was sentenced on 24 February 2012 to a month in jail for driving without a license and striking a pedestrian on his motorbike. He was to appear in April for determination of where he would serve the sentence. Merah had been placed on a watch list, interviewed by investigators, and

categorized as a Salafist. He was also on the U.S. “no fly” list.

Like Anders Breivik and Nordine Amrani, Merah’s preparations for violent attacks escaped detection. Mohammed Merah might have succeeded in carrying out additional attacks if not for a tip to police. He inquired with a dealership in Toulouse as to the removal of the GPS tracking device in the Yamaha T-Max scooter he used in the killings. The owner of the dealership notified police.

Perhaps one reason why Merah was not immediately suspected is that he did not look or act the way one would expect of an Islamist extremist. He did not have a beard; he wore typical French clothes, frequented nightclubs, and seldom went to the mosque.

Lone actors are difficult to detect and capable of extreme acts of violence/terror. In the cases of Anders Breivik, Nordine Amrani, and Mohammed Merah, there were indications of possible violence, ranging from subtle to significant. Such indications used in a training scenario with a lone actor modeled after one of these men, or an amalgamation of the three, would help to develop Soldiers’ skills in detecting lone actors in an operational environment (OE). Intelligence analysts, especially, would benefit from such a scenario. ♦

TEHRIK-E-TALIBAN PAKISTAN

by Raines Warford, OEA Team

When a crude car bomb was discovered in a smoking Nissan Pathfinder in the heart of Times Square on a Saturday evening in May 2010, few suspected it would later be revealed as the work of a Pakistani terrorist group - the [*Tehrik-e-Taliban Pakistan*](#) (Student Movement of Pakistan), commonly referred to as the Pakistani Taliban. Relatively unknown in the U.S., the group has a substantial record of violence for its short history. It conducts suicide bombings and attacks in Pakistan, is involved in attacks in Afghanistan, is accused of the suicide assassination of former Pakistani Prime Minister Benazir Bhutto, and facilitated Human Khalil Abu Mulal al-Balawi’s suicide bombing that killed seven CIA personnel in 2009, in addition to providing training and funding to failed Times Square bomber Faisal Shahzad. The Tehrik-e-Taliban Pakistan (TTP) has a personal

TTP = *Tehrik-e-Taliban Pakistan* (Student Movement of Pakistan), commonly referred to as the Pakistani Taliban.

relationship with al-Qaeda dating back to the Soviet occupation of Afghanistan. It provides shelter to al-Qaeda members, is operationally active with al-Qaeda, vowed to avenge Osama bin Laden’s death, and utilizes al-Qaeda media resources such as the *As-Sahab Foundation for*

Islamic Media Publication Web site.

Background

The origins of the TTP can be traced to two developments that occurred after the United States entered Afghanistan in October 2001. First, thousands of Pakistani Pakthun tribesmen mobilized for armed action and crossed into Afghanistan to fight U.S. and NATO

forces. The second development was the arrival in the Pakistani tribal areas of the senior leadership of the Afghan Taliban and al-Qaeda, along with hundreds of Afghan, Arab, Chechen, Uzbek, East Asian, and Sudanese fighters, fleeing Afghanistan as U.S. forces arrived.

Most of the al-Qaeda and Afghan Taliban leadership and members escaped to South Waziristan, where they were offered protection by the Ahmedzai Wazir tribe, who were sympathetic toward both groups. Al-Qaeda distributed millions of dollars to tribal leaders and leased compounds from tribesmen to establish training camps and command centers. It also recruited local tribesmen to its cause. Al-Qaeda relied on old alliances developed during the Soviet occupation of Afghanistan and built new alliances as well.

These developments both radicalized and mobilized the locals but it was the Pakistani Army's invasion of the tribal areas that transformed the widespread militancy into an insurgency. In April 2002, the Pakistani Army entered North and South Waziristan with the intent of capturing or eliminating the al-Qaeda operatives, most of whom were not Pakistanis. Initially the army received tribal elders' cooperation but the army's harsh tactics soon angered the tribal leaders. The army then met resistance not only from those who sympathized with al-Qaeda but from tribesmen who found al-Qaeda a better friend than the Pakistani government.

What began as a Pakistani Army operation against foreign al-Qaeda terrorists became a war between the Pakistani Army and rebellious tribesmen. The insurgency, which was initially limited to North and South Waziristan, spread during the next few years throughout the Federally Administered Tribal Areas (FATA). Between 2002 and 2006, multiple militias emerged in FATA and Khyber-Pakhtunkhwa (KP - previously known as Northwest Frontier Province). On 13 December 2007, a loose confederation of militant groups formed the Tehrik-e-Taliban Pakistan to coordinate their activities against not only the Pakistani Army in FATA and KP but also the International Security Assistance Force (ISAF) in Afghanistan.

Baitullah Mehsud was declared the first leader of the TTP. Baitullah was a long-time associate and supporter of the Afghan Taliban. He was killed in what was said to be an air strike by the CIA. Multiple leaders, among

them Hakimullah Mehsud, Qari Hussain, and Azam Tariq of the Bahlolzai branch of the Mehsud tribe and Wali ur-Rehman Mehsud, Maulvi Azmatullah Mehsud, and Noor Saeed from the Manzai branch vied for control of the TTP. After several weeks of reported infighting, it was Hakimullah Mehsud, Baitullah's deputy, who was chosen to succeed Baitullah. While Baitullah's philosophy was more in line with the Afghan Taliban than with al-Qaeda, Hakimullah's is the opposite. Under his leadership, the TTP expanded from a local focus to a global jihad mindset.

Ideology

The TTP's ideology is based in Sunni Islam, specifically the Deobandi sect. The Deobandi sect arose in response to British colonial rule in India and later was tempered in Pakistan into opposition to those seen as the country's neo-colonial elite. The Deobandi interpretation teaches that a Muslim's loyalty is to his religion first and to the country of which he is a citizen or a resident second. Deobandi believe Islamic societies have fallen behind the West because they deviated from the teachings of the Prophet Muhammad. Deobandi militants share the Taliban's restrictive view of women, and regard Shia as non-Muslim. They seek a pure leader, or emir, to recreate Pakistani society according to the pious example of Islam's early days under the Prophet Muhammad.

The TTP can be divided into two sub-camps. Hakimullah Mehsud and Wali ur Rehman are leading members of the core group that has a very close relationship with al-Qaeda. Its focus is on overthrowing the Pakistani government and it considers any participation in the war in Afghanistan as a secondary endeavor. This group is active in training volunteer terrorists who join al-Qaeda, such as Time Square bomber Faisal Shahzad and Human Khalil Abu-Mulal al-Balawi.

The second group consists of TTP members who are more aligned with the Afghan Taliban and focus on fighting ISAF inside Afghanistan. Some former TTP commanders have abandoned the alliance and taken their forces with them. Others remain a part of the confederation but only nominally fall under Hakimullah's control.

Organization

The TTP is an extremely decentralized organization. The TTP's structure is a network, rather than a hierarchical system. While Hakimullah Mehsud is the overall leader of the TTP, the Koran and the *Hadith* (record of the words of the Prophet Muhammad) encourage the use of *shura* (consultation) councils for decision-making, and the TTP follows this tradition. Hakimullah Mehsud, as the TTP's emir, leads the shura's decision-making process and speaks on behalf of the TTP.

Each agency has a commander, a subcommander, and leaders at the village and town levels. Individual groups of militants within the TTP obey the decisions of local shura councils. These decisions are based on local circumstances and politics. Individual commanders lead operations in their geographic areas. They act when it suits their immediate family, clan, tribal, and economic interests. The TTP's participating militias and their commanders make their own tactical decisions.

The TTP is fractured and infighting is not uncommon. The power struggle that ensued after Baitullah Mehsud's death is one example. TTP groups have fought each other for control of criminal networks, local markets, illegal taxing of commercial activities, and over differences in religious opinion. At times, they have also eliminated rival insurgent leaders or their tribal supporters. For example, in 2008 Baitullah Mehsud assassinated tribal leaders loyal to Mullah Nazir and arranged Haji Namdar Khan's assassination after he left the TTP to join a rival group.

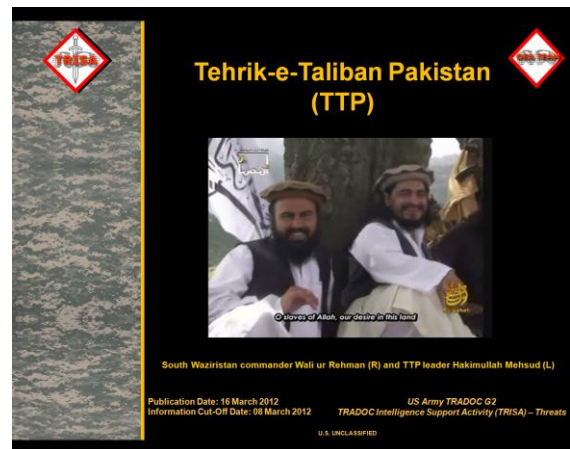
The TTP does not consist entirely of Pashtun fighters but it is primarily a Pashtun group. The Punjabi Taliban, a conglomeration of militant groups that includes *Jaishe-Mohammad* and *Laskar-e-Tayyiba*, is allied with the TTP. The Punjabi Taliban numbers around 2,000 fighters and mostly conducts attacks inside Pakistan.

The TTP also receives support from Arab, Chechen, Uzbek, and other foreign fighters. Al-Qaeda has around 100 hardcore operatives in FATA. Estimates of the number of al-Qaeda fighters in FATA range as high as 12,000. The Islamic Movement of Uzbekistan (IMU) has 1,000-2,000 members inside FATA. Uighurs, some of whom were active in the insurgency in China's Xinjiang province, are also present in the region and associate with the TTP.

The Tehrik-e-Taliban Pakistan is the most prominent opposition force to the Pakistani army but not all

insurgents fighting the army belong to the TTP. There are approximately forty militant groups with a combined membership of between 30,000 and 35,000 that are commonly referred to as Pakistani Taliban. This is a decentralized and fractured group and infighting is common. Among the groups labeled as Pakistani Taliban, some have at times worked with the TTP, others have always remained separate but non-belligerent and some oppose the TTP. The groups not aligned with the TTP are often referred to as the *Muqami* (local) Taliban.

Conclusion



The TTP is not simply a tribal or an Islamist insurgency. Its members demonstrate sectarian and tribal concerns. While local political concerns often dominate its agenda, the TTP is involved in transnational terrorism through its alliance with al-Qaeda. The TTP's many leaders have their own agendas and political interests. There are divisions among the various groups and a fluid system of alliances. Not all of the groups labeled as Pakistani Taliban are united under the TTP; some are fighting against it.

The TTP is a decentralized network that has a limited hierarchical nature in the form of a leader (the emir – Hakimullah Mehsud) and a central body (the shura council). Despite this leadership group, most decisions appear to be made at the local level.

While the TTP's decentralized structure makes it difficult to combat, it also provides the opportunity for the government of Pakistan to influence individuals and groups within the TTP. Additionally, the rivalry among various personalities within the TTP is vulnerable to exploitation.

The TTP is a significant threat to U.S. national security. The TTP facilitated Human Khalil Abu Mulal al-

Balawi's suicide bombing that resulted in the second largest single-day loss of personnel in the history of the CIA. It also trained and funded an attempted terrorist attack on U.S. soil, Faisal Shahzad's failed Times Square bombing. Hakimullah Mehsud repeatedly stated the TTP will attack the United States. If the group has an

opportunity, it will attempt an attack inside the United States. Faisal Shahzad's incompetence prevented loss of life in 2010, but the U.S. must not discount the threat presented by the Tehrik-e-Taliban Pakistan. ♦

2011 CIREBON GROUP BOMBINGS IN INDONESIA

by H. David Pendleton

Terrorists that conduct bombings can range from a single "lone wolf" to a highly complex group with interactions not only within the group, but between other groups with a similar ideology. While the combat training centers (CTC) in a short training exercise cannot construct the same type of elaborate network that the bombers in Cirebon, Indonesia, took over a decade to build, the CTCs could construct a simpler network for the training unit to find and attempt to dismantle before the group detonates its bomb(s).

Two terrorists from Cirebon conducted suicide bombing attacks in 2011 in Indonesia, but against diverse targets—a mosque and a church. On 15 April 2011, Muhammad Syarif Astanagarif, better known as Muhammad Syarif, detonated a suicide vest at a governmental police mosque while his friend, Pino Damayanto, also known as Achmad Yosepa Hayat and Ahmad Urip, was supposed to conduct a near-simultaneous suicide bombing at a nearby army mosque. While Syarif successfully blew himself up, Hayat failed in his initial attempt to become a martyr. Hayat became a successful suicide bomber on 25 September 2011, however, when he blew himself up during a church service in Solo, Indonesia.

Both Syarif and Hayat traveled a long journey to change from devout Muslims to suicide bombers. In 2001, both Syarif and Hayat joined the Cirebon chapter of the *Majelis Mujahidin Indonesia* (MMI), a Muslim group founded by the cleric Abu Bakar Ba'asyir, two years before. The two eventual suicide bombers attended *pengajians*, or discussion groups, led by Ba'asyir or other radical clerics such as Salim Bajri that indoctrinated their followers in radical interpretations of the Koran. In 2008, Ba'asyir left the MMI to form an even more radical group, the Jamaah Ansharut Tauhid (JAT), but Bajri remained behind with the Cirebon

MMI. Syarif, Hayat, and many of their friends participated in anti-vice raids against what the participants considered decadent Western organizations, spurred into action by their clerics and organized by various Muslim groups.

Syarif, Hayat, and many of their friends, including Yadi al-Hasan, left the Cirebon MMI in early 2009 to form the JAT Cirebon group, who in time changed from devout conservative Muslim activists to terrorists. Al-Hasan eventually split from JAT with six of his friends and founded an *ightiyalat*, or secret assassination cell, composed of himself as the *amir*, or leader. While Syarif and Hayat were not actually part of Hasan's assassination group, known to outsiders as the *Ashabul Kahfi*, the two suicide bombers were part of the same circle of friends as the *ightiyalat* members. Indonesia law enforcement agencies later labeled the Muslims who associated with each other, whether in the *Ashabul Kahfi* or not, as the "Cirebon Group."

Through connections with other Muslim organizations in Indonesia, both the *ightiyalat* and the suicide bombers obtained weapons and explosives to target the *kafir*, or nonbelievers. While the *ightiyalat* favored secret killings, Syarif and Hayat became obsessed with *istisyahadat* or suicide bombings as their preferred method to prosecute the *jihad*, or holy war, against the *kafir*. Many of the Cirebon Group took paramilitary training from various groups in Indonesia where the participants also received indoctrination to extremist, Islamist views and enlarged their network of like-minded terrorists. Most of the Cirebon Group, due to the continual influence of Ba'asyir, Bajri, and the other radical clerics, then believed in *mesjiid dhiror*, or the concept that state-operated mosques were legitimate



2011 CIREBON GROUP BOMBINGS IN INDONESIA *(continued)*

targets because these mosques divided the faithful. Radical Islamists considered anyone that attended the state-sponsored mosques as kafir.

By early April 2011, Syarif told his brother, Achmad Basuki, that he planned to conduct a suicide bomb attack because it was the only legitimate way to fight the jihad. On 15 April 2011, Syarif and Hayat rode a motorcycle to a friend's house in Cirebon, West Java, Indonesia where they left both a backpack that contained seven bombs and the motorcycle. The two bombers asked their friend, Arief Budiman, if anyone was allowed to enter the Adz-Dzikir police command mosque for Friday prayers. Budiman replied in the affirmative and this exchange proved that the two bombers' target selection was not well planned in advance. At about noon (local time), Syarif carried his prayer rug into the police mosque and moved up to the third row just behind the Cirebon city police chief. Syarif wore five layers of pants and a long black robe to cover the bomb wrapped around his waist and detonated the bomb at about 1215 hours. The bomb wounded 28-30 others in the mosque including the police chief, but only killed Syarif.

In the meantime, Hayat was supposed to set off his bomb at basically the same time in the *Artilleri Perahanan Udra* (ARHANUD), the Indonesian army's Air Defense Artillery Command's mosque, also open to the public. Hayat failed to detonate his bomb and told various stories afterwards why he did not. Hayat told one person that there were too many schoolchildren and ordinary citizens around the mosque while he told another friend that he was simply scared. Hayat walked past the damaged police mosque on his way back to Budiman's house, but again failed to detonate his bomb when he could have done so in the vicinity of the first responders to Syarif's attack. While at Budiman's house, Hayat and Basuki learned from television reports about the results of the police mosque attack, and all three knew the attacker was Syarif.

With the Cirebon police searching for anyone associated with Syarif, Hayat and Basuki's friends agreed to help hide the bombers even though none of the other Muslim groups knew about the planned attacks including the Ashabul Kahfi. Over the next several months, the police arrested many of Syarif's friends, including those connected with other Indonesian Muslim groups, but Hayat remained at large until he resurfaced in September.

On 25 September 2011, Hayat walked into a church service at the *Gereja Bethel Injil Sepenuh* (GBIS), or Full Gospel Bethel Church, in Kepunton, Solo (Surakarta), Central Java, Indonesia and detonated a suicide bomb just as the services ended. The explosion only killed Hayat, but injured 27 other churchgoers. If Hayat had entered from another door or exploded his bomb just a few minutes earlier, the death toll may have been quite higher.

On 1 February 2012, the Indonesian court system sentenced ten individuals connected with the two bombers, including several Ashabul Kahfi members, to prison terms of up to eight years. A week later, the Indonesian courts sentenced Basuki to nine years for helping his brother plan the police mosque bomb attack, the destruction of evidence, and explosives preparation. In a separate trial, Budiman received a seven-year sentence for obtaining and selling ammunition. The Indonesian police have caught most of those in the terrorist network associated with the bombings to include Ba'asyir, who received a sentence of 15 years in prison for his role in financing terrorism throughout Indonesia.

The TRISA OEA Team Threat Report [2011 Indonesian Bombings](#) describes the TTP of the two bomb attacks and provides a timeline of the bombers' terrorist activities both before and after the attack. Like all TRISA Threat Reports, training implications for individuals, units, or CTCs close out the product. ♦

OPFOR ARTILLERY COUNTERFIRE/COUNTERBATTERY TTP

by Walter L. Williams, Training-Education-Leader Development Team

This article provides a foundational knowledge of the conduct of opposing force (OPFOR) artillery counterfire/counterbattery tactics, techniques, and procedures (TTP). Prior to discussing OPFOR counterfire/counterbattery TTP, it is important to address the OPFOR definition of counterfire and counterbattery fire. Counterfire is fire intended to destroy or neutralize

enemy weapons. It requires the destruction of mission command centers as well as artillery weapon systems regardless of their status (firing, stationary, moving, etc.). It includes counterbattery and/or countermortar fire. Counterbattery fire accomplishes the neutralization or annihilation of enemy artillery batteries upon acquisition of their firing positions. Combat with enemy

OPFOR ARTILLERY COUNTERFIRE/COUNTERBATTERY TTP *(continued)*

artillery is one of the artillery's most important missions. It enables ground forces to achieve fire superiority on the battlefield. Counterbattery times are always shorter than counterfire times due to the types of acquisition systems used and the established priority of the neutralization or annihilation of enemy artillery batteries.

Conduct of the Counterfire/Counterbattery Mission

The OPFOR may designate artillery battalions to conduct only counterfire and counterbattery missions. The advantage of this concept is that the units have the specific mission of destroying enemy artillery through swift, effective artillery fire.

The OPFOR believes that an artillery unit must displace after a fire mission in five minutes or less. The rationale for this is twofold. First, the OPFOR estimates that it may lose 30 percent of its artillery weapons in conducting counterbattery fire for over five minutes. Second, the maximum effectiveness of friendly artillery fire falls in the first 2-3 minutes of impact. During this time, the OPFOR can expect that the enemy will take protective measures such as closing hatches, occupying shelters, dispersing, etc. The OPFOR artillery unit displaces to a new position at least 300 meters away from the occupied battalion firing position area or battery fire position. The OPFOR bases this distance for displacement on the target location error by enemy weapons location radars (WLRs), the dispersion pattern of submunitions, and possible projectile delivery errors.

Artillery Reconnaissance Systems

Artillery target acquisition is the process of detecting and locating hostile mortar, cannon, and rocket units with sufficient accuracy, reliability, and responsiveness for counterfire and counterbattery to be directed against the enemy unit. Recent technological advances in reconnaissance, intelligence, surveillance, and target acquisition (RISTA) and fire control systems provide the OPFOR a capability to rapidly disseminate information on suspected enemy targets within one minute or less. This includes the time from acquisition to computation by a fire direction center and the initial transmission of data to a firing battery. Under favorable conditions, the first artillery round may be on target within 2-4 minutes of acquisition. The desired identify-destroy cycle should not last any longer than 6-10 minutes. The following is a

discussion of the types of reconnaissance systems available for artillery target acquisition.

Weapon Locating Radars

WLRs are probably the most reliable artillery target-acquisition system. They are programmed to detect targets following a ballistic path, and they are almost impossible to deceive. (Any system that follows a non-ballistic or altered ballistic path may not be locatable to the same degree of accuracy, if at all.) Older radars tracked the projectile in flight or used the position and time difference as the projectile passed through the radar's split or dual beam. These systems were easily overloaded, and multiple targets led to inaccurate locations or a complete inability to determine a location. Phased-array radars have effectively solved this problem.

Sound Ranging

Sound ranging was the "high-tech" artillery target acquisition system of World War I. Although its basic principle (i.e., using a sound wave's different arrival times at a series of microphones) is unchanged, numerous upgrades have been made. The most common one involves using surface-emplaced microphones and a computer (with graphic display) to process the data. The required parameters and microphone coordinates are fed into the computer for the different functions of the system. Most modern day sound-ranging systems can be characterized as completely automated, EMP-protected, accompanied by a meteorological unit, resistant to electronic jamming, and completely passive. However, sound ranging is still limited by a number of factors, particularly the requirement that each microphone location be surveyed. Microphones cannot process targets when sound waves arrive at less than a 0.5-second interval. Thus, sound ranging requires data to measure the meteorological changes to the speed of sound. High winds, other meteorological conditions, and terrain can degrade the performance of sound-ranging systems.

Flash Ranging

Flash ranging is often used as a companion to sound ranging. Flash ranging involves determining the lines of bearing to a muzzle flash from several surveyed observation posts. Flash ranging is very slow and not

OPFPR ARTILLERY COUNTERFIRE/COUNTERBATTERY TTP *(continued)*

automated. Easily fooled by flash simulators and generally requiring commanding terrain for the observation posts, flash ranging has been deleted from the inventories of most armies.

Battlefield Surveillance Radar

Selected battlefield surveillance radars (BSRs) can be used for both target location and fire adjustment. However, they are ineffective as artillery-locating or weapon-locating systems. When long-range systems are available to field artillery units, they are used to develop general artillery target intelligence but not to locate firing weapons.

Unmanned Aerial Vehicle

An unmanned aerial vehicle (UAV) is considered as a RISTA asset that can be used to support counterfire missions. UAVs, either drones or remotely piloted vehicles, can provide the increased range and possibly offer increased accuracy and responsiveness, depending upon the sensor suite chosen. UAVs used for dedicated artillery target acquisition generally rely on a television sensor and data downlink such as a sensor suite, sometimes adding infrared linescan and other reduced-visibility sensors.

Human Intelligence

Last but not least of the artillery target acquisition assets are human intelligence (HUMINT) sources or observer units. HUMINT is another RISTA asset that can be used to support a counterfire mission. The units may be forward observation posts, artillery reconnaissance patrols, conventional reconnaissance forces, special-purpose forces, etc.

Artillery Responsiveness

The responsiveness of fire support units is difficult to quantify precisely. It reflects the size of the unit, the type of equipment used by the unit, the unit's training level, the crew's fatigue level, environmental conditions, and a number of other factors. Normally, artillery response times have been addressed according to a specific country or threat. However, the intent of this article is not to address artillery responsiveness by country or threat. Rather, it addresses the artillery responsiveness

by system capability. Generally, the times discussed involve the following:

- ◆ The unit is trained to appropriate national standards and has received a rating of “good” (or its equivalent).
- ◆ It is daylight, the weather and terrain are moderate, and there are no specialized clothing requirements – i.e., chemical, biological, radiological, and nuclear (CBRN) protective equipment for the crews.
- ◆ Other factors (equipment operational readiness rates, environment, fatigue, etc.) will alter these numbers (normally increasing them).

The capabilities of responsiveness are expressed as high, medium, and low.

High—Advanced automated artillery reconnaissance systems are available, including BSRs, phased-array WLRs, and sound-ranging systems (with PC-based control system and an imbedded meteorological station). Overhead and air breathing reconnaissance has all weather/real-time multi-sensor capability. Frequency-hopping /other low-probability-of-intercept radios are the standard radio. Integrated battlefield area communications system (IBACS) capability to include voice, data, video, and image for division/brigade-levels of forces are a part of the force structure. Multiple transmission media for redundant network capability (including high frequency [HF], very-high frequency [VHF], ultra-high frequency [UHF], satellite communications [SATCOM], troposcatter multichannel, line-of-sight [LOS] multichannel, and cable) for brigade- and division-level units.

Medium—Semi-automated artillery reconnaissance systems include BSRs, electromechanical WLRs, conventional sound-ranging systems (with PC-based control system), access to near-real-time electro-optical capability, SIGINT used for tip-off targeting of IMINT overhead capability, and air-breathing aerial reconnaissance (IMINT, ELINT, COMINT) capabilities with ground forces. The communications capability include integrated circuit (IC)-type radios, digital switching multichannel systems, IBACS capability under development or in purchase plan, leased military SATCOM capability for operational-level forces, and a multiple frequency network capability (HF, VHF, UHF, troposcatter, LOS multichannel, and cable) with most ground forces.

Low—Semi-automated artillery reconnaissance systems include BSRs, electromechanical WLRs, conventional

OPFPR ARTILLERY COUNTERFIRE/COUNTERBATTERY TTP *(continued)*

sound-ranging systems (without computers), access to near-real-time electro-optical overhead capability, and air breathing aerial reconnaissance (IMINT) capabilities with ground forces. The communications capability includes IC-type radios, leased military SATCOM capability for national-level reconnaissance only, and a multiple frequency network capability (HF, VHF, UHF) with most ground forces. In most cases there is no IBACS capability in the OPFOR modernization plan.

Legend

T1 = Time for detection

T2 = Time to transmit data to fire direction center or command post

T3 = Time for the parallel method of assigning targets to firing units and calculation of firing data

T4 = Time to transmit data from fire direction center or command post to the artillery firing unit

T5 = The artillery firing unit firing a 36-round volley (midpoint) with a flight time of 30 seconds or less; the firing unit is the standard element for that weapon system (section, platoon, battery, and battalion)

NOTE: The times of zero (as displayed within these tables) are due to the inability of some legacy constructive simulations to accurately portray or replicate target acquisition and communication systems time increments less than one minute.

Weapon-Locating Radars

CAPABILITY	RESPONSE TIMES (MINUTES)					
	T1	T2	T3	T4	T5	TOTAL
HIGH	0	0	1	0	2	3
MEDIUM	0	1	2	1	2	6
LOW	1	2	2	2	2	9

Sound Ranging Systems

CAPABILITY	RESPONSE TIMES (MINUTES)					
	T1	T2	T3	T4	T5	TOTAL
HIGH	1	0	1	0	2	4
MEDIUM	2	1	2	1	2	8
LOW	5	1	2	1	2	11

Battlefield Surveillance Radars

CAPABILITY	RESPONSE TIMES (MINUTES)					
	T1	T2	T3	T4	T5	TOTAL
HIGH	1	0	1	0	2	4
MEDIUM	2	1	2	1	2	8
LOW	5	1	2	1	2	11

UAV

CAPABILITY	RESPONSE TIMES (MINUTES)					
	T1	T2	T3	T4	T5	TOTAL
HIGH	3	0	1	0	2	6
LOW TO MEDIUM	7	0	2	1	2	11

Conventional Reconnaissance and Special-Purpose Forces

CAPABILITY	RESPONSE TIMES (MINUTES)					
	T1	T2	T3	T4	T5	TOTAL
HIGH	1	0-1	2-4	0-1	2	5-9
LOW TO MEDIUM	2	0-1	2-4	0-1	2	6-10

PRIVATE ARMIES

by Marc Williams, Training-Education-Leader Development Team

A private army is an armed force raised, maintained, and controlled by a private person or group, such as a warlord or a religious sect.¹ Doctrinally, private armies fall into the category of “paramilitary organizations” defined as “forces or groups distinct from the regular armed forces of any country, but resembling them in organization, equipment, training, or mission.”² They

seldom fall into the clean boxes described in our doctrine, often shifting to guerrilla and/or criminal activities. Some are based on ethnicity, some are based on religion, and some are based on political ideology. This article will provide examples of the various types of private armies the U.S. Army could face when on an expeditionary mission.

Ethnic Private Armies of Burma

Burma is a country inhabited by a diverse number of ethnicities intermingled with each other. Before Burma existed as a country (11th Century onward), the ethnic groups lived separately, established their own kingdoms, and survived independently. The result was some groups wanted to remain independent and some were willing to form a genuine federal union.³ Each group raised, trained, and employed its private army to maintain security. Many of these armies fought the British until WWII, and then continued to fight the Japanese when they invaded. Fighting continued through the imposition of rule by the military junta now in power since March 1962.⁴ There are 16 private armies of ethnic nationalities still operating in Burma today representing the Arakan, Chin, Kachin, Shan, Pa-O, Wa (more on the Wa Army below), Palaung, Kayan, Karenni, Karen, and Mon peoples.⁵ Each has distinctive flag, unit organization, tactics, and uniforms. Further, each cooperates or resists the central government based on its particular political objectives. Generally, each private army has years of combat experience and is equipped primarily with Chinese-manufactured weapons. Financing comes through various means. The Shan Army, long headed by drug lord Khun Sa in the Shan state (1974 to 1994), controlled 45% of all the heroin coming for the Golden Triangle.⁶

Political Private Armies: Sendero Luminoso (SL) of Peru and Fuerzas Armadas Revolucionarias de Colombia (FARC) of Colombia

The **SL** (Shining Path in English) of Peru is a Maoist private army that has been trying to overthrow the Peruvian government since 1980. It began as a political movement in rural Peru, especially in the Alto Huallaga, the Ene and Apurimac River Valleys (VRAE). Its founder, Abimael Guzman, or Chairman Gonzalo, was arrested in 1992 and the organization has been on the decline since.⁷ Known for carrying out indiscriminate bombings and targeted assassinations, SL now funds its operations with drug trafficking and cocaine production. Declared a dead organization by the current president of Peru, SL proved it is still a danger to citizens when it kidnapped 30 gas workers on 9 April 2012.⁸ SL is listed as a terrorist group by both Peru and the United States.⁹ Its members typically wear olive drab uniforms with

distinctive unit patches to set themselves apart from the general population.¹⁰

FARC was established in 1964 as the military wing of the Colombian Communist Party. FARC is Colombia's oldest, largest, most capable, and best-equipped Marxist insurgency, using both conventional tactics and terrorist actions.¹¹ It is organized along military lines, includes several urban fronts, and is governed by a central command called Secretariat. Its members wear military-style uniforms with distinctive unit insignia and are equipped with U.S. load-carrying equipment and a mixture of Western and Eastern weapons and explosives. FARC has openly confronted the Colombian government and has suffered many setbacks, including the killing and capture of most of its high-ranking leaders. FARC operates in Colombia and Venezuela with rest and recuperation (R&R) in Panama and Ecuador.

FARC is primarily funded through illicit proceeds, working as enforcers for the Medellin and Cali drug cartels. Cuba provides some medical care and political consultation. Explosives management training for the FARC has been done by the Irish Republican Army (IRA) and the Euskadi Ta Askatasuna (ETA, the Spanish Basque terrorist group). There is evidence also of explosives training by Cuban and Iranian operatives. This has markedly improved the FARC's proficiency in urban terrorism.¹²

Religious Private Armies: Bangsamoro Islamic Armed Forces (BIAF) of the Philippines

BIAF is the organized military arm of the Moro Islamic Liberation Front (MILF) located in the Philippines on the southern portion of Mindanao, the Sulu Archipelago, Palawan, Basilan, and the neighboring islands. The size of BIAF is estimated to be 12,500 while they claim 90,000 armed fighters. MILF was formed in 1978 when it refused to accept a peace agreement between the government and the Moro National Liberation Front (MNLF).¹³ The MILF agenda is to establish an autonomous Islamic state in the listed regions. Some of the provincial governors have their own private armies called civilian volunteers (CVO) which operate separately from the Philippines Army in opposition to MILF and MNLF. While in opposition to the Philippines Army, MILF works with them to neutralize the Abu Sayyaf Group (ASG) and Jemaah Islamiyah (JI). ASG and JI are sanctioned by the U.S. as terrorist groups, but MILF is not. BIAF/MILF uses a military style of command with designated military districts, uniforms,

and distinctive unit insignia, and uses small unit tactics in the field.

Criminal Private Armies: Los Zetas of Mexico and the United Wa State Army (UWSA) of Burma

The **UWSA** is an ethnic army in eastern Burma which is composed of approximately 20,000 soldiers led by Pao Yu-hsiang (Bao Youxiang). While there is no recognized Wa State in Burma, the UWSA controls a semi-autonomous region (Special Region No. 2) pursuant to a signed agreement with the government of Burma. It is occupied by ethnic Wa, Shan, and other minorities.¹⁴

The UWSA is financed almost exclusively by drug trafficking. The UWSA is the largest drug trafficking organization in Southeast Asia, producing heroin and methamphetamine for distribution throughout Southeast Asia and other countries. Within its semi-autonomous region, the UWSA controls the cultivation, taxing, collection, and transportation of opium; heroin processing, production and sales; methamphetamine production and sales; as well as the transportation of heroin and methamphetamine to traffickers in Thailand and China. Other independent heroin and methamphetamine trafficking organizations operating within UWSA-controlled areas also receive authorization from the UWSA to produce and traffic in drugs, and are also taxed by the UWSA. The UWSA has drug transportation and distribution networks throughout Thailand, China, Cambodia, Laos, Hong Kong, Taiwan, and numerous other countries. A substantial portion of the UWSA's drug profits has been reinvested into expanding UWSA military capabilities and areas of operation. Several ethnic and village militias also support the UWSA, making it a formidable insurgent force within Burma.¹⁵

Los Zetas of Mexico began as a group of deserters to the Gulf Cartel from the Mexican Army's elite Airborne Special Forces Group (GAFES) in the late 1990s, calling themselves Los Zetas. Working first as enforcers for the Gulf Cartel, Los Zetas used their superior training, organization, equipment, experience, and discipline to expand into kidnapping, arms trafficking, money laundering, and developing their own transportation routes into the U.S.

The Zetas is the first private military organization in the Western Hemisphere to be made up of former military

personnel from a regular army. Because of its considerable military expertise, previous experience in counter-insurgency combat, and guerrilla and urban warfare against leftist Mexican insurgent groups, the Zetas has made itself into a major private military criminal organization in its own right.¹⁶

The command structure of Los Zetas is flattened to allow rapid horizontal flow of orders from the center of the organization out to compartmentalized cells. This and the use of violence have allowed it to aggressively expand its operation across Mexico and into Guatemala and Panama. Its reputation is one of ruthlessness and high efficiency. As with any military organization, it has unit patches, and new recruits receive a two-week "basic training" in one of several training sites scattered throughout Mexico's northern states. Strength is unknown. President Obama "identified Los Zetas as a significant foreign narcotics trafficker under the Foreign Narcotics Kingpin Designation Act in 2009. The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) has since designated four principal Los Zetas and Gulf Cartel leaders and 54 Mexican principal lieutenants and enforcers for Los Zetas and the Gulf Cartel pursuant to the Kingpin Act."¹⁷

Conclusion

Generally, private armies are patterned after the military with uniforms and hierarchical rank structures, but are outside the elected government and rule of law. They generally use conventional small unit tactics such as raids, ambushes, and reconnaissance but can include criminal activity such as targeted assassinations, hostage taking, and providing security for drug trafficking organizations (DTO). Financing can come from "taxing" local villagers or legitimate fundraisers in other countries, but most often is derived from criminal activity including illegal drugs, human trafficking, extortion, murder for hire, and cyber-crime.

When private armies collude with DTOs, the mix becomes complex with armies, enforcer gangs, and cartels/mafias engaging in "privatized violence" and establishing themselves as a separate government. When the state government is weak or corrupt, private armies become effective because there is no one else to turn to for security. Dr. Max Manwaring of the Strategic Studies institute notes:

PRIVATE ARMIES *(continued)*

The dynamic of privatized violence (which has been on the global scene for centuries and is not really new) involves a powerful and ambiguous mix of terrorism, crime, and conventional war tactics and operations. This violence and its perpetrators tend to create and consolidate semiautonomous enclaves that develop into quasi states Leaders of these quasi-state (nonstate) political entities promulgate their own rule of law, negotiate alliances with

traditional state and nonstate actors, and conduct an insurgency-type war against various state and nonstate adversaries.¹⁸

U.S. units that find private armies operating in their area must conduct extensive research to identify the leadership, strength, capabilities, and intentions of these groups. Included with this should be a network analysis of financing and logistics. ♦

¹ *Oxford Essential Dictionary of the U.S. Military*, Oxford University Press, © 2012

² JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001, as amended 15 February 2012, pg 406

³ Khaing Soe Naing Aung, *Brief History of National Democratic Movement of Ethnic Nationalities Union of Burma*, (Copyright by Author, First Edition, August 2000) pp 9-10

⁴ *Ibid*, pg 36

⁵ *Ibid*, pp 40-41

⁶ “Khun Sa”, *The Economist*, November 8, 2007,

http://www.economist.com/node/10097596?story_id=10097596&CFID=26317033&CFTOKEN=13306592.stm accessed 09 March 2012

⁷ Peruvian Graffiti, “Sendero Luminoso”, <http://gci275.com/peru/sendero.shtml>, 29 December 2010, accessed 09 April 2012

⁸ Edward Fox, “Shining Path” Kidnaps 30 Gas Workers in Peru, In Sight, 10 April 2012, www.insightcrime.org/insight-latest-news/item/2468-shining-path-kidnap-30-gas-workers-in-peru, accessed 10 April 2012

⁹ Terrorist group is defined as “Any number of terrorists who assemble together, have a unifying relationship, or are organized for the purpose of committing an act or acts of violence or threatens violence in pursuit of their political, religious, or ideological objectives.” JP1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001, as amended 31 October 2009, pg 546

¹⁰ Russell Switzer, Jr., *Sendero Luminoso and Peruvian Counterinsurgency*, Master’s thesis, Louisiana State University, May 2007

¹¹ Insurgency is defined as “The organized use of subversion and violence by a group or movement that seeks to overthrow or force change of a governing authority. Insurgency can also refer to the group itself.” JP1-02, pg 266

¹² John Pike, *Revolutionary Armed Forces of Colombia*, GlobalSecurity.org, 09/07/2011, www.globalsecurity.org/military/world/para/farc.htm, accessed 10 April 2012

¹³ Terrorist Organization Profile: Moro Islamic Liberation Front (MILF), U.S. Department of Homeland Security’s National Consortium for the Study of Terrorism and Responses to Terrorism, www.start.umd.edu/start/data_collections/tops/terrorist_organization_profile.asp?id=3631, accessed 16 April 2012

¹⁴ “The New, Vicious Drug War in the North”, *Chiangri Times*, 10 October 2011, www.chiangraitimes.com/news/3010.html, accessed 09 March 2012

¹⁵ U.S. Drug Enforcement Administration, Far East Region, www.dea-rewards.com/len/USWAinfo.php, accessed 09 April 2012

¹⁶ Max G. Manwaring, A “New” Dynamic in the Western Hemisphere Security Environment: The Mexican Zetas and Other Private Armies, *Strategic Studies Institute*, September 2009, pp 18-19

¹⁷ U.S. Department of Treasury, 25 July 2011,

<http://translations.state.gov/st/english/texttrans/2011/07/20110726163412su0.9058889.html#axzz1sJ26M9v3>, accessed 17 April 2012

¹⁸ Manwaring, pp 1-2

EXPLOSIVE REACTIVE ARMOR (ERA)

by Dr. Jon H. Moilanen, Threats Terrorism Team (T3) Integration

Explosive reactive armor (ERA) is one of several survivability means to match and/or overmatch the penetrating capability of high-explosive antitank (HEAT) and armor-piercing fin-stabilized discarding sabot (APFSDS) type munitions. This article addresses three primary topics:

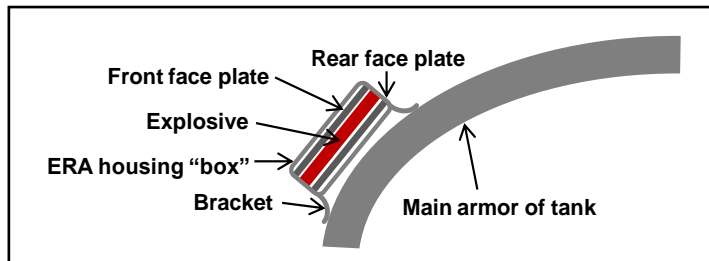
- ♦ What is ERA?
- ♦ How does ERA function?
- ♦ What issues impact the continued ERA research and development (R&D)?

EXPLOSIVE REACTIVE ARMOR (ERA) *(continued)*

Much of the R&D data is classified. This article is a generic, unclassified primer of information.

What is ERA?

ERA is appliqué armor protection comprised of two metal plates with an explosive sandwiched between the two plates. ERA provides additional survivability protection to complement the armor already integral to a vehicle's turret or chassis.



Generic composition of explosive reactive armor

How Does ERA Function?

When a projectile impacts the front face plate, the explosive component of the ERA causes the metal plates to separate and shift. This disruption of the warhead trajectory can significantly deflect or defeat a shaped-charge, chemical-energy (CE) plasma stream from HEAT ammunition. ERA also has some capability to limit the effects of a kinetic-energy (KE) penetrator from APFSDS ammunition. The angle of the ERA mounting on a vehicle assists in deflecting some of the velocity of the plasma stream or KE penetrator. Other considerations include the thickness of the two face

plates, the effectiveness of the explosive, and how the plates shift and separate as a result of the explosion.

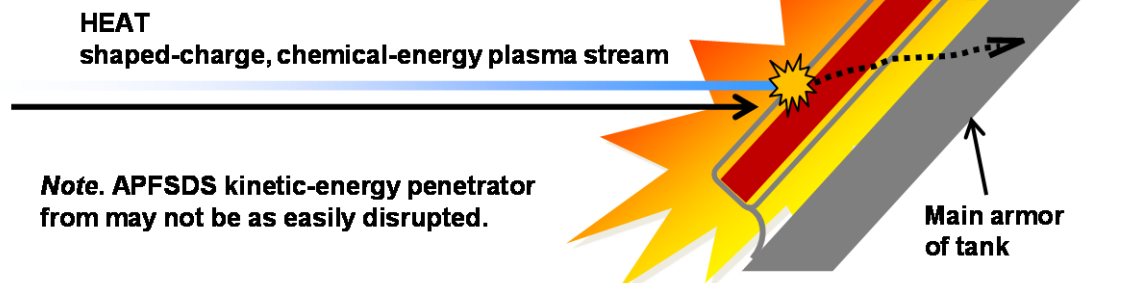
What Issues Affect Continued ERA Research and Development?

Effective survivability is a continual R&D challenge. Once a means of defeating armor is validated, other means are usually already being researched and tested as countermeasures. Issues of bulk and added weight to a vehicle are a very visible consideration of any ERA, and have direct implications on what air, sea, or land transportation systems can be used for intra- and/or inter-theater movements and mobility. Some vehicles are significantly wider with appliqué ERA and may not be able to fit on or in particular transportation carriers. ERA can add over two tons to the gross weight of a tank. Some main battle tanks can exceed 65 tons.

Many forms of ERA pose a hazard in the area surrounding of a vehicle when ERA detonates. The explosion and particles from the steel plates can injure unprotected personnel. Although this presents a danger to dismounted infantry or unarmored vehicles maneuvering near a tank, the possible effects to civilians caught in the midst of a combat action can also result in rules of engagement (ROE) restrictions.

Tandem warheads cause other issues. However, relatively simple responses include two sets of plates and explosives within an ERA appliqué. The capability of the precursor warhead of a tandem warhead is a consideration of how the ERA is configured. For example, the first and second detonations of a tandem

1. Upon HEAT plasma stream contact with face plate of ERA, the ERA explosive detonates.
2. The explosion and shifting plates of the ERA can reduce the perforation or penetration ability by disrupting the trajectory of the plasma stream.
3. ERA provides improved survivability protection that is additive to the armor integral to the tank turret and chassis.



ERA effects on a shaped-charge plasma stream

EXPLOSIVE REACTIVE ARMOR *(continued)*

HEAT warhead can be disrupted by an initial and subsequent sandwich of ERA metal plates and explosive.

Severe angles of ERA on some weapon systems suggest that the increased angles of the appliqué may assist in minimizing performance of a HEAT or APFSDS warhead. This severe angle of ERA is apparent in systems such as the Kontakt-5 and follow-on generation ERA appliqué.

Development of more effective ammunition and ERA is an ongoing contest. Currently, the Russian Federation

continues to develop next-generation (3d generation) ERA such as a Relikt complex. Reports claim improved armor protection from tank main gun ammunition and antitank guided missiles (ATGMs).

For additional unclassified tank survivability and lethality features, see TRADOC G-2 *Worldwide Equipment Guide*, Volume I, Chapter 5, "Tanks." With Army Knowledge Online access, go to <https://www.us.army.mil/suite/files/21872221>. ♦



Simplified image of Kontakt-5 explosive reactive armor

UPDATE: SUICIDE BOMBINGS IN SYRIA

by Raines Warford, OEA Team

Since the publication of the Threat Report "[Suicide Bombings – Syria](#)" in February, new developments have occurred. As we assessed, the use of suicide bombings continues. Specifically, on 17 March 2012, two SVBIEDs exploded at government buildings in Damascus, killing at least 27 people and wounding around 100 others. The blasts struck the aviation intelligence department and the criminal security department. Once again, Syrian state media blamed "terrorists" for the attacks while the Syrian opposition claimed that President Bashar al Assad's government staged the attacks. Just as in the previous suicide bombings, no group claimed responsibility for the attacks.

Prior to the latest suicide bombings, al-Qaeda leader Ayman al Zawahiri urged Muslims in Iraq, Jordan, Lebanon, and Turkey to join the revolt in Syria. The call to action came in an eight-minute video titled "Onward, Lions of Syria," posted on Islamist Web sites. Previously, in July 2011, al Zawahiri encouraged Syrian protestors while implying al-Qaeda was not involved with them, stating, "God knows that if it were not for the raging war with the New Crusades in which we are

engaged . . . my brothers and I would be at your side today, in your midst defending you with our necks and chests."

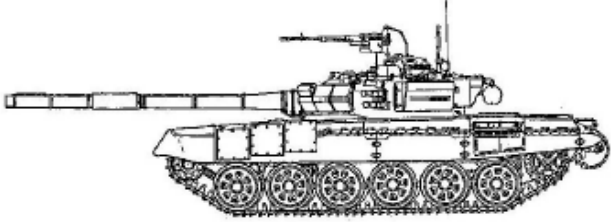
Director of National Intelligence James R. Clapper said in testimony before the Senate Armed Services Committee on 16 February 2012, "We believe that al-Qaeda in Iraq is extending its reach into Syria." A "disturbing phenomenon that we've seen recently, apparently, is the presence of extremists who have infiltrated the opposition groups," Clapper said. "The opposition groups in many cases may not be aware they are there." Clapper's unclassified statement for the record to the Senate Armed Services Committee did not state al-Qaeda is believed to be responsible for the suicide bombings in Syria. The same is true of Defense Intelligence Agency director LTG Burgess' unclassified statement for the record.

Despite the latest developments, there is still no definitive evidence as to those responsible for the suicide bombings in Syria. As the conflict continues, more such attacks are likely. ♦

WEG HIGHLIGHT: RUSSIAN MAIN BATTLE TANK T-90S

The *Worldwide Equipment Guide (WEG)* was developed to support OPFOR equipment portrayal across the training community. The WEG is not a product of the U.S. intelligence community. The WEG is a TRADOC G-2 approved document. Annual WEG updates are posted on the Army Knowledge Online (AKO).

Russian Main Battle Tank T-90S

	<table> <tr> <th>Weapons & Ammunition Types</th><th>Typical Combat Load</th></tr> <tr> <td>125-mm smoothbore gun</td><td>43</td></tr> <tr> <td>APFSDS-T</td><td>(mix est) 14</td></tr> <tr> <td>HEAT-MP/HEAT</td><td>3</td></tr> <tr> <td>HE-Shrapnel/Frag-HE</td><td>20</td></tr> <tr> <td>ATGM</td><td>6</td></tr> <tr> <td>7.62-mm coax MG</td><td>2,000</td></tr> <tr> <td>12.7-mm NSVT AA MG</td><td>300</td></tr> </table>	Weapons & Ammunition Types	Typical Combat Load	125-mm smoothbore gun	43	APFSDS-T	(mix est) 14	HEAT-MP/HEAT	3	HE-Shrapnel/Frag-HE	20	ATGM	6	7.62-mm coax MG	2,000	12.7-mm NSVT AA MG	300
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<p>SYSTEM Alternative Designations: T-90, T-90E, T-72BU Date of Introduction: 1994 Proliferation: At least 1 country Description: Crew: 3 Combat Weight (mt): 46.5 Chassis Length Overall (m): 6.86 Height Overall (m): 2.23 Width Overall (m): 3.37 Ground Pressure (kg/cm²): 0.87</p> <p>Automotive Performance: Engine Type: Original 840 hp Diesel. Upgrade has 1,000 hp. Cruising Range (km): 500 km/650 km with extra tanks Speed (km/h): Max Road: 60 Max Off-Road: INA Average Cross-Country: INA Max Swim: N/A Forging Depths (m): 1.2 Unprepared, 5.0 w/smorkel</p> <p>Radio: R-163-504 UHF, R-163-UP receiver/R-173 for T-90S</p> <p>Protection: Armor, Turret Front (mm): 780-810 KE, 1,020-1,220 CE Applique Armor (mm): Turret roof, front of track skirt Explosive Reactive Armor (mm): Kontakt-5 2nd Generation ERA Active Protective System: TshU-1-7/Shtora-1 countermeasure suite Mineclearing Equipment: Roller-plow set and plows available Self-Entrenching Blade: Yes NBC Protection System: Yes Smoke Equipment: 12 x 3D17 smoke grenade launchers, VEESS</p> <p>ARMAMENT Main Armaments: Caliber, Type, Name: 125-mm smoothbore gun 2A46M-1 or -4 Rate of Fire (rd/min): 7-8 (lower in manual mode) Loader Type: Separate-loading autoloader, and manual Ready/Stowed Rounds: 22 in carousel, 15 more at hand /6 (est) Elevation (°): INA Fire on Move: Yes (gun rounds and ATGMs)</p> <p>Auxiliary Weapon: Caliber, Type, Name: 7.62-mm (7.62x 54R) Machinegun PKT Mount Type: Turret coaxial Maximum Aimed Range (m): 2,000 Max Effective Range (m): Day: 800 Night: 800 Fire on Move: Yes Rate of Fire (rd/min): 250 practical / 650 cyclic, 2-10 round bursts</p>	<p>Caliber, Type, Name: 12.7-mm (12.7x108) AA MG NSVT Mount Type: Turret top Maximum Aimed Range (m): 2,000 Max Effective Range (m): Day: 1,500 Night: 800-1,300 Fire on Move: Yes Rate of Fire (rd/min): 210 practical/ 800 air targets in bursts</p> <p>ATGM Launcher: Name: 2A46M-1 tank gun Launch Method: Gun-launched Guidance: SACLOS laser-beam rider, REFLEKS missile launcher Command Link: Encoded infrared laser beam Rate of Launch: (missiles/min): 2-3, depending on range Launcher Dismountable: No</p> <p>FIRE CONTROL FCS Name: FCS 1A45T Main Gun Stabilization: 2E42-4, 2-plane Rangefinder: Laser sight Infrared Searchlight: Yes, when II sight employed (See NOTES) Sights w/Magnification: Gunner: Day: 1A43 and 1G46/PERFECT, 3.6/12x Field of View (°): 20/2.5 Acquisition Range (m): 5,000 detection (85%P-hit for ATGM) Night: AGAVA-2 (See Notes) Field of View (°): INA Acquisition Range (m): 2,600 Commander Fire Main Gun: Yes</p> <p>VARIANTS T-90: Successor to T-72BM, originally called T-72BU, with fire control and armor upgrades similar to those on the T-80U. Despite using the lower cost T-72 chassis, this tank incorporated more recent components than the T-80U and is in some ways superior. The original tank still had an II night sight, not the thermal sight upgrade; and it had the under-powered 840-hp engine.</p> <p>T-90E: Early export variant.</p> <p>T-90S: Export variant, with option for upgrades. Several subsystem changes, such as upgrade FCS, new engine, removal of Shtora-1, etc., have been added based on customer preferences, and are included in export versions of the tank. Some Russian T-90s were upgraded to this standard. Most of these are being sold to India, with the 1,000 hp engine upgrade, and with addition of air conditioning. All Russian tank upgrades to versions of this standard will be exported.</p> <p>T-90SK: Export command variant</p>																

WEG HIGHLIGHT: RUSSIAN MAIN BATTLE TANK T-90S *(continued)*

Russian Main Battle Tank T-90S continued

<p>T-90A: Originally known as T-90 SM or T-90M, it is now accepted for Russian service as the standard tank. Some sources erroneously call it T-90S (see pg 5-37 to 5-38).</p> <p>Project Rhino: Most T-90 and T-90S tanks will be imported by India and later upgraded as Bhishma under this program and agreement with Russia (see pg 5-30).</p> <p>MAIN ARMAMENT AMMUNITION Caliber, Type, Name: 125-mm APFSDS-T, BM-42M Maximum Aimed Range (m): 3,000-4,000 Max Effective Range (m): Day: 3,000-4,000 Night: 2,600 Armor Penetration (mm KE): 590-630 at 2,000 meters</p> <p>125-mm HEAT-MP, BK-29M Maximum Aimed Range (m): 4,000 Max Effective Range (m): Day: 4,000 Night: 2,600 Armor Penetration (mm CE): 650-750 It has some HE effects similar to Frag-HE rounds against personnel and materiel targets.</p> <p>125-mm HEAT, BK-27 Maximum Aimed Range (m): 4,000 Max Effective Range (m): Day: 3,000+ Night: 2,600 Armor Penetration (mm CE): 700-800</p>	<p>125-mm HE-Shrapnel Focused-Fragmentation, Ainet Maximum Aimed Range (m): 5,200 Max Effective Range (m): Day: 5,000 Night: 2,600 Tactical AA Range: 4,000-5,000 Armor Penetration (mm): Can defeat IFV and APC</p> <p>125-mm Frag-HE-T, OF-26 Maximum Aimed Range (m): 5,000 Max Effective Range (m): Day: 5,000 Night: 2,600 Armor Penetration (mm): Can defeat IFV and APC. A near miss will seriously damage or destroy most IFVs and APCs.</p> <p>Other Ammunition Types: French Giat 125G1 APFSDS-T, Russian BM-42 and BM-32 APFSDS-T. Note: The Russians may have a version of the BM-42M with a DU penetrator. The Russian BM-48 APFSDS-T round penetrates 650-700 mm</p> <p>Antitank Guided Missiles: Name: AT-11B/Invar Warhead Type: Tandem Shaped charge (HEAT) Armor Penetration (mm CE): 900 behind ERA /1050 conventional Range (m): 5,000 day, 2,600 night</p>
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NOTES

The original tank version of the tank has an 840-hp diesel engine. The engine in subsequent models is upgraded. Engine options include 950, 1,000 and 1,100 hp.

The tank may be fielded with the original II sight from the T-80 series (Buran-PA, 800-1300 meters range). However, marketing materials feature the AGAVA-2 thermal sight. There are thermal sights available which permit night launch of ATGMs.

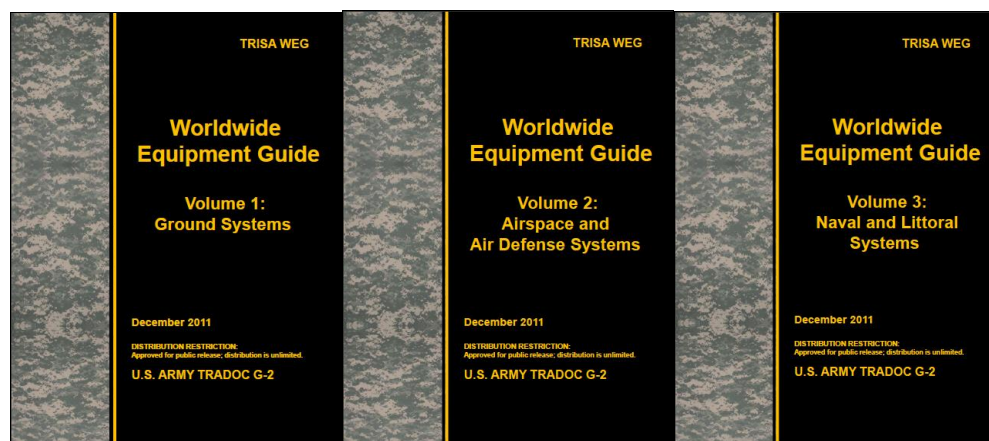
The T-90 may be fielded with full Shtora-1 package (laser warning receiver with auto-slew gun capability, LWR-directed smoke grenade launchers, and EO-IR jammer), with a partial package, or without Shtora-1. Shtora-1 illuminators can be used for night illumination.

An improved gun, 2A46M-4, with improved accuracy and use life is available for fitting to the T-90.

The BK-29 round, with a hard penetrator in the nose is designed for use against reactive armor, and as an MP round has fragmentation effects. The more recent BK-27 HEAT round offers a triple-shaped charge warhead and 50 mm more penetration.

The electronic fuzing system for HE-Shrapnel rounds uses technology similar to that for French Oerlikon's AHEAD round. The round is specially designed to defeat targets by firing fragmentation patterns forward and radially, based on computer-calculated settings from the LRF and other inputs. Targets are helicopters and dug in or defilade priority ground threats, such as ATGM positions. Rate of fire is 4 rd/min.

The 12.7-mm MG NSVT has both remote electronically operated sight PZU-5 with vertical stabilization, night acquisition, and a gun-mounted K10-T reflex sight.



MONTHLY WRAP-UP OF CTID DAILY UPDATES

CTID analysts produce a daily [CTID Daily Update](#) to help our readers focus on key current events and developments across the Army training community. Available on AKO, each *Daily Update* is organized topically across the Combatant Commands (COCOMs). This list highlights key updates during April 2012. The *Daily Update* is a research tool, and an article's inclusion in the *Update* does not reflect an official U.S. Government position on the topic. Also, CTID does not assume responsibility for the accuracy of each article.

*There were no CTID Daily updates for the first week of April.



- 09Apr—**Persian Gulf:** [U.S. Navy deploys 2nd aircraft carrier to Gulf](#)
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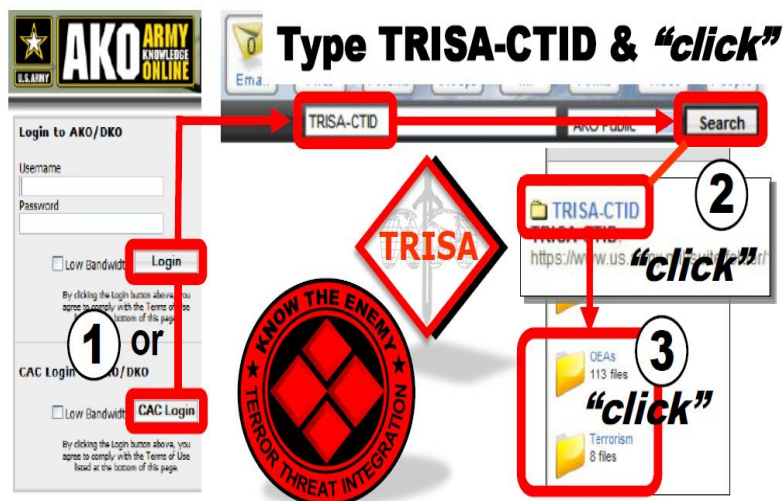
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