Our New Paradigm:

Supporting Warfighters in a Different Kind of War During an Era of Evolving National Security Challenges

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Editor's Note: This article's main focus is on the recent troop surge in Iraq and its effects on how the warfighters fight and how we support them with Space capabilities.

The global security environment facing our Army is fundamentally more challenging than anything we have confronted in our Nation's history. We must now be able to protect against a much broader range of threats, including terrorism, non-state actors with access to advanced weaponry and technology, and adversaries' use of ballistic and cruise missiles. All of these threats could result in significant casualties and social upheaval. The potential use of weapons of mass destruction by terrorist organizations is an area of particular concern.

Current and potential adversaries often attempt to operate at the extremes of the conflict spectrum. At one end of the spectrum, the Democratic People's Republic of Korea (North Korea) is actively pursuing nuclear weapons capabilities. In July 2006, North Korea test-fired one intercontinental and multiple short range ballistic missiles. Their subsequent test of a nuclear warhead in October 2006 made the missile tests even more alarming. More recently, in May and June 2007, North Korea also launched multiple short-range missiles toward the Sea of Japan. Similarly, Iran's history of deception, concealment, and obfuscation regarding their nuclear research efforts and ongoing enrichment of uranium as part of an apparent nuclear weapons development program have been of great concern to the international community. Iran's state support of terrorism, most notably Hezbollah and Hamas, and arms shipments to both Iraq's Shiite extremists and Afghanistan's Taliban are also of concern.

Advances in technology and the changing nature of the threat have enabled state and non-state actors access to capabilities, including Space products and services that nearly rival those of the United States. The Chinese test of an anti-satellite missile in January 2007 against one of their aging weather satellites in Low Earth Orbit highlights the potential vulnerability of our own satellites. The debris field created by the destruction of this Chinese satellite produced thousands of fragments that will pose a physical hazard for decades to our satellites and those of the international community.

At the other end of the threat spectrum, groups such as remnants of Saddam Hussein's former Ba'athist regime and the Taliban attempt to avoid the overwhelming conventional superiority of U.S. forces by using asymmetric tactics to exploit current vulnerabilities in our capabilities. Advanced technology and Internet access supported by modern weapons and a variety of high explosives are commonplace tools of contemporary threats. The proliferation of technology greatly enhances the capabilities of irregular forces and non-state opponents. This has already occurred in Iraq and Afghanistan as our Nation's warfighters have engaged highly capable enemy forces that quickly adapt new capabilities and tactics into their operations.

Military operations today in Iraq, Afghanistan, and elsewhere reflect the tough challenges inherent in countering extremist and insurgent groups in highly complex environments. These combatants do not limit themselves to purely military means, but instead try to advance their purposes by attacking the religious symbols and leaders of their foes, subjugating and terrorizing the populace, and attempting to undermine external support. They often belong to loose organizations with common objectives but different motivations and no central controlling body. Identifying the leaders is often quite difficult. Clearly, the enemies we now face are

"We are locked in a war against a global extremist network that is fixed on defeating the United States and destroying our way of life. This foe will not go away nor will they give up easily, and the next decade will likely be one of persistent conflict. We are engaged in a long war."[1]

— General George W. Casey, Jr.
U.S. Army, Chief of Staff
Arrival Message

different than the one faced during the initial combat operations for Operations Enduring Freedom and Iraqi Freedom.

The purpose of this article is to enhance understanding of the insurgencies in Afghanistan and Iraq and to frame the environment in which the Nation's warfighters are conducting combat operations. Several areas are identified where we need to focus emphasis for support of tactical commanders. In preparing this article, attention was given to incorporation of recently published doctrinal guidance (particularly the new FM 3-24, Counterinsurgency) (COIN) and several other authoritative reports and analyses. This article is meant as a primer for thought, discussion and action. Read it as a companion piece to my article entitled "Asymmetric Threats: A Vital Relevancy for Information Operations," published in the previous issue of the Army Space Journal. In setting the tone for this article, the quote by GEN Peter Schoomaker, former Chief of Staff, Army, succinctly describes the challenge before us: "This is a game of wits and will. You've got to be learning and adapting constantly to survive."[2]

Insurgency: An Ancient Scourge in Modern Times

Insurgency and its tactics are as old as warfare itself. Joint doctrine defines an insurgency as "an organized movement aimed at the overthrow of a constituted government through the use of subversion and armed conflict"[3] Political power is the central issue in insurgencies and counterinsurgencies, with each side working to gain acceptance of its authority as legitimate and, depending on the motives of the party involved, win the loyalty, dependability, or control of the population. The "central goal of an insurgency is not to defeat the armed forces, but to subvert or destroy the government's legitimacy, its ability and moral right to govern."[4] Potential insurgents attempt to rally action based on a number of potential causes. Economic inequities can foster revolutionary unrest. So can real or perceived racial or ethnic persecution. Some extremists use perceived threats to their religion or the belief their actions will facilitate apocalyptic warfare leading to a "period of golden rule" to justify terrorist tactics.[5]

Contemporary insurgents may use different approaches at different times, applying tactics that take best advantage of circumstances. However, fear and violence, either targeted directly at the populace or to portray government ineptitude or inaction, are the stock and trade of insurgent action. They may carry out barbaric acts against members of the general public and may also attempt to demonstrate that the state cannot guarantee security within its territory. In addition, insurgent forces, pursuing apparently quite different agendas, may form loose coalitions when it serves their interests. However, these same groups may fight among themselves, even while engaging Coalition Forces.[6] The Internet is often used as a means to recruit, finance and disseminate results of their actions.

The Insurgency in Iraq

Today, our military forces in Iraq confront adversaries representing a variety of hostile interests, including former elements of the Saddam Hussein regime (the Republican Guard and the paramilitary Fedayeen), armed sectarian militias [Supreme Council for Islamic Revolution in Iraq (SCIRI), the Mahdi Army or Jaish al Mahdi (JAM), Pesh Merga, al-Qaeda in Iraq (AQI), and others,] disaffected Sunni Arab Iraqis, foreign fighters and organized criminals. In total, enemy insurgents may exceed 100,000 armed fighters. These insurgents have different goals, although nearly all oppose the presence of U.S. forces in Iraq. Insurgent forces do not depend on foreign sources for the majority of their support in the areas of funding, explosives and leadership. To a greater extent, these areas of support are provided from inside Iraq.[7]

Insurgent activity is centered in the Sunni-dominated parts of Iraq, primarily the areas northwest of Baghdad and between the cities

As Coalition Forces respond to a car bombing in South Baghdad, a second car bomb is detonated, targeting those responding to the initial incident. The attack, aimed at the Iraqi police force, resulted in 18 casualties, two of which were police officers, during Operation IRAQI FREEDOM. *Photograph taken by SPC Ronald Shaw Jr.*

of Tikrit, Ramadi, Samarra and Fallujah.[8] These adversaries possess a range of military capabilities and in some ways are more capable of independent operations than the regularly constituted Iraqi Security Forces. Their use of face-to-face communications supplemented by cell phones, reliance on austere logistical support, and collocation with the civilian population challenge our ability to locate and fix them for apprehension or engagement. Their tactics include, but are not limited to, suicide bombings, improvised explosive device attacks, sniper shootings, mortar and rocket attacks, kidnapping private Iraqi citizens as a fund-raising tactic and murder. Hundreds of university professors, doctors, journalists and government officials have been assassinated or abducted.[9] Insurgent attacks also include sabotage of economic targets such as power stations, oil pipelines and other infrastructure.

The majority of insurgent attacks against Coalition Forces involve improvised explosive devices targeting convoys and patrols. Most improvised explosive devices are made from leftover former Iraqi regime munitions and foreign explosive materials and although often hastily put together can have devastating results. There have also been instances of what appeared to be generators, donkey-drawn carts, and ambulances used in attacks on Coalition Forces.[10] The most lethal type of improvised explosive device is the Explosively Formed Penetrator, which has a liner in the shape of a shallow dish that, upon detonation, is transformed into a projected body of metal. Although these Explosively Formed Penetrators currently make up only a small percent of the improvised explosive devices found, they have been particularly hazardous since they are able to penetrate armored vehicles.[11] Insurgent tactics have also included several attacks against helicopters, and increasingly insurgents have staged carefully planned, complex ambushes and retaliatory attacks on Coalition Forces.[12] The downing of an OH-58D helicopter and subsequent attacks on the quick reaction forces in late-May 2007 is an example of a thinking and adaptive enemy that is changing its tactics.[13]

Al-Qaeda in Iraq (AQI), previously lead by Abu Musab al-Zarqawi and reportedly currently headed by Abu Ayyub al-Masri, is the largest and most active of the Iraqi-based terrorist groups. AQI's goals include instigating a wider sectarian war between Iraq's Sunni and Shiite religious groups, and driving the United States out of Iraq. AQI also poses a threat outside Iraq, as it is the only terrorist group in the country with known aspirations for external attacks, including possibly against targets in Europe and the U.S.[14]

AQI is one of the most visible perpetrators of anti-Shiite attacks in Iraq. A hallmark of its strategy is to instill fear in the Sunni population, sow sectarian tension, and incite the Shiite population of Baghdad to take up arms and continue fighting in order to discredit the United States and the fledgling government of Iraq.[15] The majority of AQI fighters are Iraqis. Foreign fighters, numbering an estimated 1,300, play a supporting role or carry out suicide operations. AQI has increased the number and variety of spectacular attacks in Baghdad; including terrorist attacks against the Sunni population that demonstrates the organization is willing to target all civilians, not just Shiites, in order to achieve its goals.[16] These attacks have included car and truck bombs to inflict civilian casualties for inciting retaliatory attacks by Shiite groups and to generate strategic effects on public opinion. Cargo trucks filled with chlorine and rigged with explosives have been detonated in at least six instances.[17] The bombing of the al-Askari Mosque, one of the holiest sites in Shi'a Islam, in the Iraqi city of Samarra in February 2006 is

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believed to have been caused by bombs planted by AQI. Although no injuries occurred in the blast, the mosque was severely damaged and the bombing sparked a wave of sectarian violence. AQI insurgents are also suspected of destroying the mosque's two minarets in June 2007.

In some areas of Iraq, sectarian militias have established themselves as extra-governmental arbiters of the populace's security, in some cases, after first undermining that security. Some of these militias hold sway with considerable political power. Sectarian militias also kidnap, torture and execute members of the other sect. These extra-judicial killings contribute to further retaliatory attacks, armed neighborhood vigilante groups and widespread criminal activity. A number of attacks have been made against "soft" targets, principally civilian gatherings, which cause a great number of casualties. Sectarian violence in Iraq has forced hundreds of thousands of people to flee from their homes in mixed Sunni-Shiite areas for the safety of neighborhoods in which their own sect dominates.

The largest of the militias in Iraq, the Jaish al Mahdi, is led by Moqtada al-Sadr and may number as many as 60,000 fighters.[18] This Shiite militia group exerts significant influence in Baghdad and the southern provinces of Iraq and on the Iraqi central government itself. The Jaish al Mahdi, was dealt a severe blow in May 2004 after suffering heavy losses in weeks of fighting with U.S. forces. More recently, Moqtada al-Sadr reportedly told his forces to "try at all costs" to avoid conflict with Americans. His fighting cadres were ordered to go to ground, hide their weapons, take down their check points, stop the ethnic cleansing and terror tactics against the Sunni population, and ignore (i.e., not cooperate) with U.S. and Iraqi Security Forces.[19] The longer-term veracity of this strategy is open to conjecture.

The other large Shiite militia, the Badr Brigade, is affiliated with the SCIRI, which is led by Abdul Aziz al-Hakim. The Badr Brigade has long-standing ties with the Iranian Revolutionary Guard Corps. While wearing uniforms of security services, Badr fighters have targeted Sunni Arab civilians. Badr fighters have also clashed with the Jaish al Mahdi,, particularly in southern Iraq.[20]

The Insurgency in Afghanistan

The insurgency in Afghanistan is comprised of a number of armed groups, including Taliban guerrillas, followers of former prime minister and fundamentalist warlord Gulbuddin Hekmatyar, al-Qaeda terrorists recruited from across the Islamic world, and local fighters. Other groups include tribal militias contesting central government authority and criminal networks engaged in the booming illicit narcotics trade. The insurgency began a few months after U.S.-led forces drove the Taliban out of the Afghan capital, Kabul, in November 2001. It became more effective two years ago, when insurgents switched to new tactics, including breaking up into small groups of 10 fighters or less, attacking "soft" civilian targets and limiting head-on confrontations with Coalition and Afghan troops. Estimates on the total number of insurgent forces vary from 5,000 to 15,000, including Pashtun tribal militias. The Taliban has claimed responsibility for over two-thirds of recorded bombing attacks, primarily those in the southern and southeastern provinces.[21]

Insurgent groups in Afghanistan have carried out a variety of attacks on civilians or civilian institutions, apparently with the intent of instilling fear among the broader population and as a warning not to work in similar capacities. Civilian government workers, nongovernmental organizations employees and civilian officials have all been attacked. Additionally, humanitarian aid workers, doctors, students, clerics, schoolteachers and civilians at crowded bazaars have been specifically targeted. In addition to bombings and other attacks that resulted in damaged shops, buildings and infrastructure, insurgents have targeted medical clinics and local schools, which are often the only symbol of government in remote areas.[22]

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Responding to the Threat in Iraq: The 2007 Surge of U.S. Forces in Baghdad

Counterinsurgency is military, paramilitary, political, economic, psychological, and civic actions taken by a government to defeat insurgency[23]

Until January 2007, U.S. forces in Baghdad generally operated from Forward Operating Bases. Some Iraqi army units were stationed in the neighborhoods, advised by a small number of U.S. military personnel. This force stationing strategy changed as a result of President George W. Bush's announcement on Jan. 10, 2007 to increase the number of U.S. forces in Baghdad with a mission "to help Iraqis clear and secure neighborhoods, to help them protect the local population, and to help ensure that the Iraqi forces left behind are capable of providing the security that Baghdad needs."[24] Subsequently, the President agreed to send additional Soldiers to help with an anticipated increase in detainees. The nearly 30,000 additional Soldiers, comprised of five combat brigades and combat support and military police units, reinforce the approximate 132,000 American military forces currently serving in Iraq.[25] This new approach acknowledged the vital role that establishment of security in Baghdad had to attainment of long-term goals in Iraq.

President Bush also approved sending a brigade to Afghanistan to accelerate the training of local forces.[26] This brigade will reinforce the approximate 45,000 international Soldiers currently in Afghanistan. Approximately 32,000 of these Soldiers are under the United Nations-mandated and International Security Assistance Force led by the North Atlantic Treaty Organization (NATO), and are stationed in Kabul and in different provinces throughout the country. The largest concentration of Coalition Forces is in the southern portion of Afghanistan.[27] The United States and some of its allies have an additional 10,000 to 13,000 Soldiers in Afghanistan not under NATO command, primarily at Bagram Air Base north of Kabul and in eastern provinces along the Pakistani border. Their primary mission is directed against al-Qaeda and other forces suspected of involvement in international terrorism.[28]

Baghdad Security Plan

Operation Enforcing the Law (Fardh al-Qanoon in Arabic), the Baghdad Security Plan, began on Feb. 13, 2007. The foundation of this operation is a force of five Brigade Combat Teams ordered to Baghdad by President Bush's direction in January 2007. GEN David H. Petraeus, Commanding General, Multinational Force – Iraq, described the new strategy: "Improving security for Iraq's population is, of course, the overriding objective of our strategy. Accomplishing this mission requires carrying out complex military operations and convincing the Iraqi people that we will not just 'clear' their neighborhood of the enemy, we will also stay and help 'hold' the neighborhoods so that the 'build' phase that many of their communities need can go forward."[29]

The Baghdad Security Plan basically involves three components: clear (separate insurgents from the population that supports him); control (occupy the zones the insurgents previously operated from); and retain (coordinate actions over a wide area and for a long enough time that insurgents are denied access to the population centers that could support them).[30] MG Joseph Fil, commander of Multinational Division — Baghdad, indicated, "The first objective within each of the security districts in the Iraqi capital is to clear out extremist elements neighborhood by neighborhood in an effort to protect the population. In addition, after an area is cleared, we're moving to what we call the control operation. Together with our Iraqi counterparts, we'll maintain a full-time presence on the streets, and we'll do this by building and maintaining Joint Security Stations throughout the city."[31]

Baghdad Security Plan — Clear

During the "clear" phase of the Baghdad Security Plan, operations are focused on clearing out significant insurgent strongholds, eliminating organized resistance and turning over cleared areas to Iraqi forces. Operations are also conducted to supplement the efforts of the Iraqi Security Forces requesting assistance. "Clearly, killing or capturing insurgents will be necessary [during the clear phase], especially when an insurgency is based in religious or ideological extremism. However, killing every insurgent is normally impossible. Attempting to do so can also be counterproductive in some cases; it risks generating popular resentment, creating martyrs that motivate new recruits, and producing cycles of revenge."[32] Therefore, operations focus on separating the insurgents from the means of their support and identifying the groups with goals flexible enough to allow productive negotiations and determining how to eliminate the extremists without alienating the populace.

Raids are conducted to gain actionable intelligence and disrupt terrorist, insurgent, and militia networks and operations. Car bombs, truck bombs and other Improvised Explosive Devices do not usually originate in the neighborhoods where they are detonated. Insurgents seek secure locations to meet, plan operations and assemble the explosive devices. Other insurgents then transport the explosives to locations where they will be used, and still others emplace them so that they will harm Coalition Forces or civilians. Clearing the neighborhoods of these activities enhances security for the local populace.

Stationing U.S. forces in Baghdad's

U.S. Soldiers train Iraqi Security Forces as they prepare to eventually take full responsibility of the day-to-day security mission. *Photograph courtesy of*

neighborhoods and downtown areas is central to the Baghdad Security Plan. After President Bush announced the troop increase for Baghdad in mid-January, many of the U.S. forces stationed in Baghdad were moved to establish and man Joint Security Stations in the city's neighborhoods. This strategy was in accordance with a key principle noted in FM 3-24: "Ultimate success in COIN operations is gained by protecting the populace, not the COIN force. Aggressive saturation patrolling, ambushes, and listening post operations must be conducted, risk shared with the populace, and contact maintained."[33] GEN Petraeus also noted: "We can't commute to the fight in COIN operations; rather, we have to live with the population we are securing."[34]

The Joint Security Stations are jointly manned with U.S., Iraqi Army, Iraqi police, and National Police personnel to enhance local security, facilitate training, and the increase in flow of information. Units spread out further into Baghdad from the larger hubs of the Joint Security Stations by establishing Combat Outposts. Initial stationing plans called for at least one Joint Security Station in each of the nine administrative districts in Baghdad. As of early-May 2007, more than 60 Joint Security Stations, staffed by American and Iraqi forces, and U.S. Combat Outposts were in Baghdad.[35] The total number could eventually be more than 100.

The Joint Security Stations and Combat Outposts are guarded by tall concrete barriers, concertina wire, large bags reinforced with metal and filled with dirt, and machine-gun positions on rooftops and in windows. Anti-armor weapons and reinforced fortifications are added to stop suicide bombers driving vehicles. Soldiers conduct patrols on foot and in vehicles to secure the local population and establish an official presence while other personnel maintain security of the Joint Security Stations and Combat Outposts.[36] In the second week of February alone, U.S. forces conducted over 20,000 patrols, up from 7,400 in the first week of the month.[37] The net result of the continued, increasing presence of U.S. forces appears to be having an important psychological, as well as practical, effect on the enemy and the people in threatened neighborhoods. The local populace gains confidence in their ability to provide Coalition Forces useful information without the fear of reprisal. As a result, Iraqis increasingly provide information that enables identification and detention of insurgents and the location of Improvised Explosive Devices targeting Coalition Forces. They also provide useful intelligence to develop an image of how the insurgent groups function. One assessment indicated: "The Iraqi people are encouraged — life is almost immediately springing back in many parts of the city. The murder rate has plummeted. Improvised Explosive Device attacks on U.S. forces during their formerly vulnerable daily transits from huge U.S. bases on the periphery of Baghdad are down — since these forces are now permanently based in their operational area."[38]

Baghdad Security Plan — Control

Successfully clearing an area from insurgent influence is being followed by actions to expand the secure area to an adjacent zone and then expand the secure area again when that zone is completely secure. The goal of this phase is to expel the insurgents from Baghdad, so hard-core insurgents are forced to regroup on rural terrain. When they do, Coalition Forces will then work to prevent the insurgents from re-infiltrating. It is easier for Coalition Forces to fight insurgents on rural terrain, where they cannot conceal themselves as readily among the population.

Coalition Forces also work to provide continuous security for the inhabitants and prevent the return of insurgents. Checkpoints are established to control access to secure areas, particularly where there are heavy concentrations of personnel, e.g. markets. For example, a concrete wall around Adhimiya, a mainly Sunni district of Baghdad, is being built to control movement of Sunni car bombers and to stop Shiite death squads from getting in.[39] Patrols are conducted to disrupt and capture insurgents who have remained in or reentered the secure areas.

Military action can address the symptoms of a loss, or perceived loss, of legitimacy for the central government. In some cases, it can eliminate substantial numbers of insurgents; however, success in the form of a lasting peace requires restoring legitimacy.[40] As observed in one assessment of successful COIN operations: "Recognition and assurance of these rights by the government has been essential to turning a population away from insurgents and their promises."[41] As a result, Coalition efforts also focus on gaining the confidence and support of the local populace for the Iraqi government. The Iraqi people must believe that Iraqi Security Forces are improving rather than undermining their security. Transferring the country's security requirements to competent and professional security forces that look out for the welfare of all Iraqis is the long-term goal of our Nation's strategy. In support of that goal, U.S. military forces facilitate the ongoing training of Iraqi soldiers and security personnel. In fact, a recent assessment indicated: "The Iraqi training base is cranking out 24,000 soldiers a year from five Regional and two national training bases. More than 12 police academies are producing 26,000 new police a year. The end goal will be an ISF of more than 370,000 police and army [personnel] organized in 120 battalions."[42]

Enhancing local security and reducing insurgent terror tactics against the local populace also supports local officials' confidence in taking steps to protect themselves. For example, in late-May 2007, reports surfaced that Sunni residents of a west Baghdad neighborhood used assault rifles and a roadside bomb to battle AQI insurgents. The mayor of the Amiriyah neighborhood indicated residents rose up to expel AQI, which had alienated other Sunnis with its indiscriminate violence and attacks on members of its own sect.[43] Progress has also been reported in Anbar Province, a Sunni enclave to the west of Baghdad. Late last year, local sheiks, most of whom had lost family members to killings by AQI, formed a group they called "the Awakening." The sheiks ordered their followers to assist the American military forces against the jihadists and began urging their followers to join the police. Enlistments have soared as a result. All 23 of the major tribes in and around Ramadi have joined the movement. In exchange, U.S. forces have provided the tribes considerable amounts of weapons and vehicles. A nearly 50 percent drop in violence was reported after tribal leaders turned against the Sunni extremists.[44]

Baghdad Security Plan — Retain

The primary objective of any COIN operation is to foster development of effective governance by a legitimate government.[45]

Over time, COIN operations aim to enable a country to provide the security and rule of law that allow establishment of social services and growth of economic activity. An area will move into the retain phase when Iraqi Security Forces are fully responsible for the day-to-day security mission. Offensive operations will focus on eliminating the insurgent cadre, while defensive operations focus on protecting the populace and infrastructure from direct attacks.[46] At this point, U.S. military personnel, partnered with Iraqis, will remain behind to maintain security, reconstitute police forces, and integrate police and Iraqi Army efforts to maintain the population's security.[47] Coalition Forces will begin to move out of the neighborhood and into locations where they can respond to requests for assistance as needed.

As security improves, military resources contribute to supporting government reforms and reconstruction projects. Restoring confidence in the government increasingly will be based upon its ability to provide basic services. For example, an issue that motivated fighters in some Baghdad neighborhoods in 2004 was lack of adequate sewer, water, electricity and trash services. Tremendous work remains to provide full civic services to the populace.

The Space Professional's Role

Early in 2007, GEN Petraeus, soon after assuming command of Multinational Force-Iraq, said: "The way ahead will not be easy. There will be difficult times in the months to come. But hard is not hopeless, and we must remain steadfast in our effort to help improve security for the Iraqi people. I am confident that each of you will fight with skill and courage, and that you will remain loyal to your comrades-in-arms and to the values our nations hold so dear."[48] This statement provides insightful guidance for Space professionals engaged in supporting our Nation's warfighters in combat operations.

Providing relevant support to warfighters means furnishing the capabilities to allow them to pursue the enemy around the clock. Space-based capabilities are an essential component of this support. Identifying the most relevant operational requirements for warfighters is an ongoing process; however, four areas define the majority of current needs.

Warfighters need Actionable Intelligence

Intelligence is the critical enabler for successful COIN operations. Intelligence operations that help detect insurgents for detention or engagement is the single most important step to protect a population from threats to its security.[49] Very simply, "actionable intelligence means providing commanders and Soldiers a high level of situational understanding, delivered with speed, accuracy and timeliness, in order to conduct successful opera-

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tions."[50] In support of this requirement, tactical information must be gathered, processed, and then disseminated as actionable intelligence in accordance with tactically relevant time lines to enable Soldiers, and commanders at all levels, to take appropriate action.

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Situational awareness is particularly vital given the challenges of conducting operations in built-up areas, as is currently the case in Iraq. Insurgents operating in small groups or as individuals are often hidden in the larger population and tend to use this "complex terrain" to their advantage. Identifying and targeting these small groups or individual insurgents — barely distinguishable from the civilian population — present a distinct challenge. Overhead systems are often the only effective way to limit this impact. Persistent aerial surveillance can often identify people, vehicles and buildings. Geospatial intelligence capabilities can use imagery and infrared systems to find hidden base camps and insurgent positions. The imagery produced by the Space Support Elements and Army Space Support Teams are examples of the types of products that are being provided.

Manned and unmanned aircraft can also patrol roads to locate insurgent ambushes and Improvised Explosive Devices. When insurgents operate in rural or remote areas, such as attempts to infiltrate from Syria and Pakistan, aerial reconnaissance and surveillance also prove useful. Air-mounted signals intelligence collection platforms can detect insurgent communications and locate their points of origin.

Support of these capabilities will require expansive increases in bandwidth availability, which is already in great demand. In the near-term, bandwidth demand will continue to grow much faster than the available supply, particularly with sensors competing with communications to provide commanders operational information. This situation is not expected to improve in the near-term, and military satellite communications bandwidth will be limited, even with heavy dependence on commercial sources.

Support must be Responsive and Flexible

Rapidly evolving combat situations demand responsive and tailorable solutions. As noted in FM 3-24, "If a tactic works this week, it might not work next week. If it works in this province, it might not work in the next."[51] LTG Robert Elder, Jr., Commander, 8th Air Force, and Joint Functional Component Commander for Global Strike and Integration, U.S. Strategic Command, also noted: "Although we tend to focus on the desired effects of operations, we clearly need to consider the undesired effects of our actions as well. Virtually every action contributes to some effect, and, of course, not all effects are desirable.[52] Creation of more insurgents and alienation from the populace that we are trying to support are examples and, occasionally, the results. In the words of Winston Churchill, "However beautiful the strategy, you should occasionally look at the results."[53]

Competent insurgents are adaptive. Insurgents quickly adjust to successful COIN practices and rapidly disseminate lessons learned. In fact, the more effective a COIN tactic, the faster it may become out-of-date because insurgents have a greater need to counter it. As noted in FM 3-24: "In COIN, the side that learns faster and adapts more rapidly — the better learning organization — usually wins."[54] Accordingly, Space professionals must highlight to material developers the challenges encountered by warfighters to ensure future systems and modifications to existing systems are developed and quickly fielded. They must also seek to use existing systems in new ways and responsively address evolving challenges. For example, regarding Electromagnetic Interference trou-

bleshooting, Space Support Elements and Army Space Support Teams can serve as the local subject matter experts on Electromagnetic Interference incidents. The Elements and Teams will probably not solve the problem, but they can play a role in explaining the problem to the local leadership and in working to send current information through the appropriate reporting channel to the responsible activity. Similarly, Space professionals can lend considerable expertise in the areas of precision navigation and timing, information operations, and Joint Blue Force Situational Awareness. The Fall 2004 and Spring 2005 issues of the Army Space Journal contain multiple articles referencing recent developments in Joint Blue Force Situational Awareness. I encourage your review of both issues.

Support must be assured

Today, Space-based capabilities enhance the effectiveness of our combat forces, particularly in the areas of communications, navigation, locating and targeting the enemy, and weather prediction. As a result, Space capabilities affecting warfighters' capabilities must be protected. Our adversaries must also be denied the capability to interfere with our warfighters' access to these capabilities. As noted recently by the Director, National Security Space Office: "The United States views purposeful interference with its Space systems as an infringement on its rights and will take actions necessary to preserve its rights, capabilities, and freedom of action in Space including denying, if necessary, adversaries the use of Space capabilities hostile to U.S. national interests."[55]

Although the U.S. currently possesses overwhelming Space capabilities, our dominance in Space is not guaranteed. The rapid growth in commercial and international Space capabilities increases adversaries' ability to monitor U.S. forces and potentially negate U.S. advantages in Space. Threats may arise from many sources, including: jamming against ground segments or stations; radio frequency jamming that interferes with Space system links; lasers that temporarily degrade or destroy satellite subsystems; and Space-based imagery.[56] As an example, satellite imagery of 1-meter resolution is currently available for purchase from commercial sources.

Space Control operations ensure freedom of action in Space for the United States and its allies and, when directed, Space control denies adversaries' freedom of action in Space. Significant efforts are ongoing across the Department of Defense to enhance our Space Control capabilities. The U.S. Air Force is also taking steps to enhance Space situation awareness and understand what is occurring in orbit. As noted by GEN Kevin Chilton, Commander, Air Force Space Command, "If you don't know what's going on — if you don't know what's up there, if you don't know its capabilities, if you don't know if it maneuvered or not, if you can't try to divine intent, if you don't know if it's close to one of your systems, if you don't know if they're even doing something — if you have a malfunction, then you can't even begin to discuss the other aspects of this question."[57]

Support must be provided within a Joint, Interagency and Multinational (JIM) Environment

As noted in the National Security Strategy: "We are fighting a new enemy with global reach. To succeed in our own efforts, we need the support and concerted action of friends and allies. We must join with others to deny the terrorists what they need to survive: safe haven, financial support, and the support and protection that certain nation-states historically have given them.[58] While U.S. relationships will likely continue to center around those nations that share fundamental political, economic and security interests, the U.S. may also enter into coalitions with other nations on short notice. As a result, operations in a Joint Interagency and Multinational Environment are a necessary and vital component of successful warfighting. The Multinational Force-Iraq currently includes more than two dozen Coalition partners while the International Security Assistance Force comprises partners from more than three dozen nations.

Space-based capabilities can provide or facilitate the exchange of information required to support and sustain multinational and coalition operations. These complementary and reinforcing effects not only minimize relative vulnerabilities but also enable the delivery of combat power greater than the sum of the individual parts. Army Space forces have contributed significantly to these efforts. For example, in the early phases of Operation Iraqi Freedom, Army Space Support Team support included the provision of imagery to the Office of the Coalition Provisional Authority. In the fall of 2005, an Army Space Support Team also produced many images of all of the election sites prior to the Iraqi elections. More recently, maps and imagery have been provided to the Iraqi Security Forces. Assistance has also facilitated Iraqi Security Force training on Global Positioning System devices.

Conclusion

The contemporary operating environment has changed. What was once a linear construct with relatively defined boundaries between front and rear, has evolved into a complex environment with few visible front lines and stationary forces. Adaptive enemies continue to develop increasingly sophisticated and complex weapons to attack our forces at perceived weak spots. Non-kinetic effects have also been introduced into their operations. However, we must not lose perspective. The

nature of warfare and the capabilities of our adversaries can quickly evolve. Future conflicts, as with those of the past, may involve conventional large force operations. Warfighters must be prepared to move, shoot and communicate in this dynamic environment. Space professionals must be prepared to support them.

In a 1986 article titled "Uncomfortable Wars: Toward a New Paradigm," GEN John R. Galvin, former Supreme Allied Commander, Europe, observed: "An officer's effectiveness and chance for success, now and in the future, depend not only on his character, knowledge, and skills, but also, and more than ever before, on his ability to understand the changing environment of conflict." GEN Galvin's words were relevant then; they are even more applicable today.[59] Secure the High Ground!

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