NATIONAL DEFENSE UNIVERSITY

NATIONAL WAR COLLEGE

THE ATTACK OPERATIONS PILLAR OF THEATER MISSILE DEFENSE:
THE NEED FOR A JOINT EFFORT

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The threat of a theater ballistic missile attack against military forces of the United States turned from theory to reality the evening of January 18, 1991 That night Iraqi dictator Saddam Hussein launched the first of eighty-six SCUD missiles against Saudi Arabia and Israel [1] The launching of the ballistic missiles exposed a major weakness of the United States military As a result, significant efforts to develop a defense against ballistic missile attack has been a high priority mission for the Department of Defense (DoD)

The DoD ballistic missile defense focuses on two aspects - theater missile defense (TMD) and national missile defense The first priority of the ballistic missile defense initiative is "the rapid development and deployment of theater missile defenses to protect forward deployed U S and allied forces and allied population centers "[2] National missile defense, the second priority, provides for security against a strategic missile threat to the mainland of the United States

Theater missile defense is composed of four pillars: battle management command, control, communications, computers, and intelligence (BM/C4I), passive defense, active defense, and attack operations [3] Billions of dollars have been spent on active defense means to include the Patriot Advanced Capability Level 3 (PAC 3), the AEGIS / Standard Missile Block IVA, the Theater High Altitude Area Defense System (THAAD), and the Advanced Concepts Programs However, all of these systems are reactive in nature and contribute to TMD only after the enemy has gained the initiative by launching a missile against U S or allied forces

[1] Brigadier General Robert H Scales Jr , Certain Victory: The United States Army in the Gulf War, (Washington, D C Brassey's Inc , 1994), p 181

[2] William J Perry, Annual Report to the President and the Congress, (Washington, D C U S Government Printing Office, 1995) p 9.
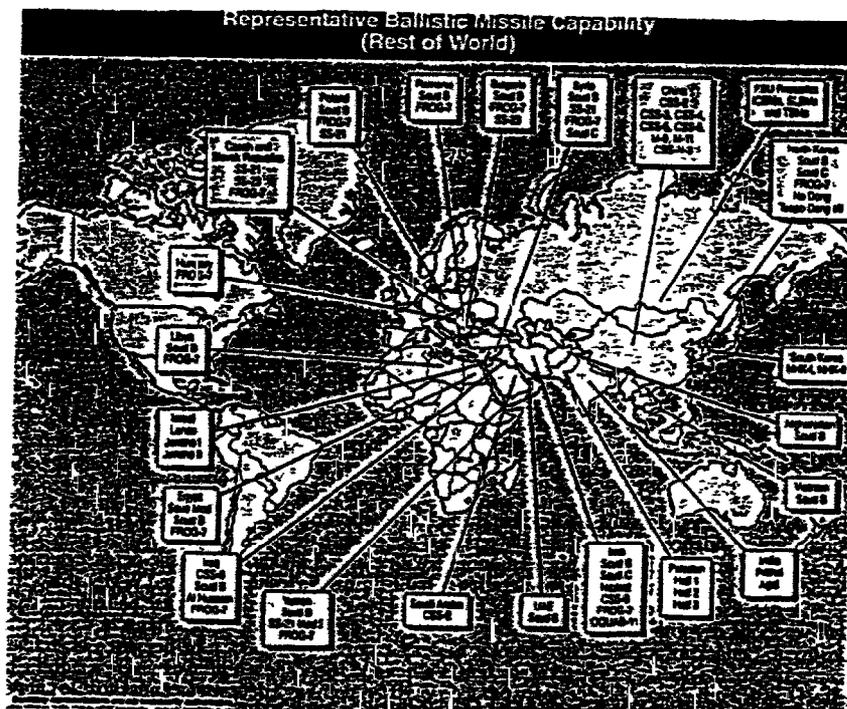
[3] Ibid , p 242

The fourth pillar of theater missile defense. attack operations provides the only way for U S forces to seize the initiative and destroy the enemy's theater missiles before they can be used against us. This paper analyzes the feasibility of conducting attack operations as a pillar of the TMD concept. A look at the world wide missile threat and the continuing proliferation points to an increased threat in the future Next, an examination of the U S military's current attack operations doctrine shows it is woefully short The 1995 joint exercise ROVING SANDS, an air defense exercise conducted at Fort Bliss, Texas and throughout a large portion of New Mexico, focused on finding and destroying enemy theater missiles before they were launched While great strides were made in developing attack operations doctrine, much work remains to integrate the joint effort This paper concludes by recommending a few ways to increase the synergistic effect of attack operations to destroy the enemy's theater missiles before they can destroy us

The Theater Missile Threat

DESERT STORM is now the most studied war in military schools around the world. One of the major lessons learned from that war is that the United States military cannot be fought on a weapons system to weapons system basis. Future adversaries know they must attack the U S military forces indirectly Weapons of mass destruction (WMD) provide the means to conduct such indirect attacks and ballistic missiles provides the way to get the WMD to their destination Both the WMDs and the ballistic missiles have been highly proliferated throughout the world in recent years For countries contemplating opposing the United States in the future, the combination of WMD and ballistic missiles provide an ideal weapon system

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Since the end of the Cold War, the United States military has converted to a primarily stateside-based force   This means that when the decision to commit U S. military forces to a theater of operation is made, they are likely to have to make a forced entry into a hostile country or region   Any future adversary will try to disrupt the movement and buildup of U S. military forces and what better way than to attack a port facility or staging area full of American equipment and troops   Additionally, an attack of this type will likely cause large amounts of casualties which may weaken the resolve of the American people to support a potential conflict.   More than twenty-five countries currently possess or are developing nuclear, chemical, or biological weapons while fifteen of these countries have the capability to deliver the WMDs by ballistic missiles.[4] The map below gives a general synopsis of the widespread proliferation of ballistic missiles.[5]

Representative Ballistic Missile Capability
(Rest of World)

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[4]   Ibid , p. 239.

[5]   Ibid., p 240.

The proliferation of WMDs and ballistic missiles will continue to worsen as Russia, North Korea, and China sell advanced military equipment for hard currency Additionally, the continuing spread of sensitive technologies, such as global positioning system receivers, contribute to the improvement of ballistic missiles as a more accurate weapons system

The combination of WMD and theater ballistic missiles pose a unique threat for future regional contingencies An enemy can limit the freedom of action of the United States military or our allies by simply threatening a missile attack The threat of a nuclear, biological, or chemical attack may intimidate an ally from allowing American forces to enter a country.

Missile attacks can also cause the United States and its allies to divert military forces to counter the threat. Saddam Hussein demonstrated that missile attacks with conventional warheads were very effective terror weapons. Iraq's SCUD attacks on civilian population centers in Saudi Arabia and Israel affected the coalition's military strategy General Schwarzkopf diverted numerous operational assets, including forty percent of all air sorties, to counter the Iraqi missile threat because of political pressure from the strategic level [6] The coalition's military forces experienced great difficulty in trying to locate and destroy the mobile missile systems Even though a concerted effort was made, there were no confirmed kills of any mobile missile systems [7] As a result, immediately after DESERT STORM a major effort to develop doctrine for attack operations as part of the theater missile defense was initiated

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[6] Scales, p. 184

[7] Michael R Gordon and General Bernard E Trainor, The General's War The Inside Story of the Conflict in the Gulf, (New York Little, Brown and Company, 1995), p 227

Attack Operations

"Attack operations are very, very hard When you're out there looking for a launcher in a large area, it is kind of like looking for a needle in a haystack," is how General Dennis Reimer, the Chief of Staff of the United States Army described attack operations [8] General Schwarzkopf more aptly described the magnitude of the problem he encountered during DESERT STORM conducting attack operations against mobile missile systems "Just the area of western Iraq alone is 29,000 square miles. That's the size of Massachusetts, Vermont, and New Hampshire all put together, and you try to find and destroy nine, maybe ten trucks "[9] Since a coordinated doctrine for attacking mobile missile systems did not exist prior to DESERT STORM, an ad hoc concept was devised to attempt to destroy the SCUDs before they were launched against Saudi Arabia or Israel Each service contributed to the SCUD hunting, however, there was no centralized coordinating headquarters to control the effort

The immediate reaction to the increased pressure to stop the SCUD attacks was to divert air force assets to find and destroy the mobile missile systems The air force used the Joint Surveillance Target Attack Radar System (JSTARS) in an attempt to find the SCUDs on the roads as they moved to their firing positions Additionally, national intelligence assets focused on suspected launch areas and targeted Iraqi strategic communications trying to intercept or jam orders for missile attacks

8 Sean D Naylor, "Missile Defense? Kill 'Em On the Ground / Drill Focuses on Knocking Out Launchers Before They Can Launch," Army Times, June 5, 1995, p 2

9 Rick Atkinson, Crusade. The Untold Story of the Persian Gulf War, (New York Houghton Mifflin Company 1993), p 144

Approximately 1,460 air sorties were conducted in the SCUD hunting effort [10] F-15E, F-16, and A-10 aircraft, assets vitally important to the effort to prepare the battlefield for the ground attack, were diverted to the mission

The army contributed to the SCUD hunting effort also, however, not until late in the war The army created a special 877-man Joint Special Operations Task Force (JSOTF) of aviation and ground forces [11] The ground forces infiltrated deep into Iraq near suspected SCUD launch areas Once they detected the mobile missile systems, the ground forces directed attack helicopters and air force aircraft against enemy SCUDs and command and control assets

The combination of air strikes and special operations missions helped slow the rate of fire and forced the Iraqis to find new launch sites for their SCUDs. However, the overall assessment of the operation was a failure despite claims from the air force and CENTCOM that numerous mobile SCUDs had been destroyed. A March 1991 Secret Defense Intelligence Agency memorandum sates, "In spite of over a hundred claims of destroyed SRBM (short range ballistic missile) mobile launchers, national intelligence resources did not definitely confirm any of the "kills "   The Coalition's inability to permanently degrade SRBM command and control is also significant, despite determined efforts to incapacitate Iraqi military and civilian national networks Even in the last days of the war, Baghdad retained a sufficient capability to retarget SRBMs from urban to military high-value targets, such as the Dimona nuclear reactor "[12] The failure of the SCUD hunting effort stemmed from faulty intelligence an exaggerated faith in air power, the commander's skepticism about the use of special operations

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[10] Gordon and Trainor, p 238

[11] Scales, p 186

[12] Gordon and Trainor, p 227

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forces, and the failure to integrate any significant ground forces into the plan The
SCUD hunting effort could have succeeded only through a synergistic effort of the
joint forces under centralized control With this lesson from DESERT STORM
ingrained in the minds of military leaders, the framework for developing a doctrine for
conducting attack operations as part of the theater missile defense concept was
already established

Recommendations for Future Attack Operations

As the United States military moves toward the 21st century, new capabilities
are being integrated to optimize individual performance and develop an operational
synergy that can effectively attack enemy theater ballistic missiles Optimizing the
effectiveness of systems capable of attacking the enemy's theater ballistic missiles has
been a major thrust in joint doctrine and operations. This effort is taking the U S.
military into the realm of information warfare As sensors, platforms and weapons
improve, the battlespace will continue to expand allowing the U S military to detect
and destroy the enemy's missiles faster and at greater distances. This military
application of the information age to attack operations as part of theater missile
defense gives theater level commanders increased opportunities to influence TMD in
real or near real time

The key to attack operations as a pillar of theater missile defense is timely and
accurate intelligence A well trained Iraqi SCUD crew could move from a hide
position, erect the launcher, fire the SCUD, recover the launcher and return to the hide
position in eighteen minutes [13] With this short reaction time rapid flow of accurate

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[13] Naylor, p 3

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intelligence is fundamental to success Endurance medium altitude unmanned aerial vehicles (UAVs) provide a wide coverage of suspected hide positions and routes of movement Improved night capabilities of the UAVs further enhance their effectiveness National reconnaissance satellites also aid in identifying theater ballistic missiles as they move from hide to firing positions The direct downlink of overhead sensors into a command post enables a quantum leap in timeliness of intelligence. Special operations forces provide the key HUMINT source of intelligence. Their stealthiness enables them to penetrate deep into enemy territory and maintain continuous observation on enemy missile systems They will also be available to direct air strikes on the enemy missiles if required. The all-source intelligence analysis center fuses the data from the myriad of sources and rapidly provides intelligence directly to the system tasked to attack the enemy missiles.

The extended range Army tactical missile system (ATACMS) provides a unique weapons system to rapidly attack an enemy missile system The ATACMS is a long range missile system capable of engaging targets in excess of 350 kilometers.[14] The Block I system provides an area weapon capable of destroying soft targets within a kilometer of impact The Block II system carries smart submunitions with very high accuracy for point targets such as known hide or launch positions. The extended range of the ATACMS provides the theater commander an excellent weapons system to destroy the enemy's missiles if their location is known

The Apache attack helicopter provides the theater commander the capability to find and destroy the enemy's missiles if their exact location is unknown During ROVING SANDS, an attack helicopter squadron was placed under the theater commander's control specifically to conduct attack operations. The Apache can

[14] Weapons Systems: United States Army 1995, (Washington, D C U S Government Printing Office, 1995), p 83

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rapidly react to suspected locations, search a broad area, find and destroy the enemy missiles The night capabilities of the Apache allow it to conduct twenty-four hour, day or night operations. Extended fuel tanks allow it to penetrate up to 300 kilometers deep into enemy territory to find and destroy his miisiles The Apache's capabilities will be further enhanced with the fielding of the Longbow modification and upgrade When this system is fielded in 1997, the system will use millimeter wave radar to find and engage targets at greater distances and with greater accuracy The Apache definitely provides the theater commander an invaluable asset to find and destroy enemy missile systems if their exact locations are unknown

The air force provides numerous assets key to executing attack operations. The JSTARS provides near real time wide area surveillance and deep targeting. It can detect enemy missile systems as they move from their hide to firing positions. The AWACS provides airborne command and control of assets tasked to attack the enemy missiles Additionally, it provides updated intelligence to aircrews diverted to attack the enemy missiles. RIVET JOINT adds to the intelligence assets already discussed by providing communications intelligence associated with the enemy missile system's command and control. The F-15E, F-16, and A-10 still provide the basis for air force aircraft capable of attacking enemy missiles Accurate locations of the enemy missiles are essential to enable these aircraft to destroy the enemy systems Special operations forces providing laser designation for smart munitions fired from the F-15E and F-16 aircraft proved especially effective during ROVING SANDS

The United States military has no shortage of sensors or weapons systems capable of conducting attack operations The problem during DESERT STORM was synchronizing these assets Theater missiles represent too significant a threat to be handled on an ad hoc decentralized basis as was done in DESERT STORM A TMD

Tactical Operations Center (TOC) designed specifically to fight the theater missile defense battle was tested during RCVING SANDS While the TMD TOC was organized to control all four pillars of TMD, it proved especially valuable in coordinating attack operations The TMD TOC had direct downlinks from USSPACECOM assets providing timely and accurate intelligence The TMD TOC coordinated the detection and destruction of the enemy missile systems depending on accuracy and timeliness of information, location of the enemy missiles, and available attack assets The joint headquarters coordinated and controlled the theater missile defense very effectively While procedures still need to be refined, the headquarters provides a great improvement over previous attempts to execute attack operations.

Future enemies of the United States know they cannot match the modern combat systems possessed by the U S military. However, they know they can disrupt the movement of forces and extract a high toll by using weapons of mass destruction fired from ballistic missiles The U.S. military must seize the initiative and attack enemy missile systems before they can be fired on ports, staging areas, airfields, or assembly areas All of the services provide assets key to attacking the enemy missiles A joint effort that maximizes the synergistic effect of all of these assets is the only way TMD attack operations can succeed General Reimer best expressed the need for a joint effort in attack operations when he stated, "It is going to take the Army and Air Force, working together, totally coordinated to lick them "15

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15 Vago Muradian, "Big Jobs and They Both Want It / Reimer Says Army, Air Force Should Share Missile Defense " Army Times, December 18, 1995 p 2

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