



ARROYO CENTER

Competent, Concealed, Congested: ***The Challenges of Future Warfare***

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Israel Did Not Fare Well in 2006 Second Lebanon War

- Hezbollah abducted IDF (Israel Defense Force) soldiers and launched rocket attacks after IDF response
- IDF initial approach: fires (mostly air) attack and limited ground raids
- Army committed late; operations not against a strategic purpose—looked ineffectual and cannot stop short range rockets
- After 34 days ceasefire agreement; Hezbollah moves from border and UN peacekeepers deployed



***War not a defeat for Israel, but absence of victory very problematic—
IDF looks weak for the first time***

Israeli Strategic Perspectives Before Lebanon— Not Dissimilar From Those of Many Western Countries Today

- Belief by 2006 that Israel beyond era of major war: “the main challenge facing land forces would be low intensity asymmetrical conflicts” (*Winograd Commission Report*)
- IDF interpretation of Kosovo, OEF, and OIF: standoff attack by fires (principally air power) can deter or defeat state adversaries
- U.S. presence in Iraq is a hedge
- Israeli Army riveted on stopping second *al-Aqsa* intifada terrorist attacks inside Israel.
- ***This all made sense at the time—and was wrong***



“From 2000 until 2006, the typical mission for an Israeli infantryman was to man a checkpoint in the Palestinian territories or to snatch a suspected Palestinian militant out of his house in the middle of the night—missions very similar to those currently being executed by U.S. infantrymen in Iraq”

Source: Andrew Exum, “Hizballah at War: A Military Assessment”

IDF Adapts to Low Intensity Conflict (LIC)

- Low intensity conflict (LIC) the central mission for the Army
- Israeli Army got very good at LIC (this is not COIN)
- “Fighting is training”
- Combined arms capabilities atrophy Army stretched by Second Intifada; removal of Israeli citizens from Gaza
- Air controllers removed from brigades; little air-ground training

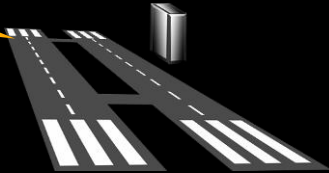


“At no stage was an Israeli unit required to face down an enemy force of a size larger than an unskilled infantry squad.”

Harel and Issacharoff, *34 Days: Israel, Hezbollah and the War in Lebanon*

The Changing Nature of Targets—Concealment: Cannot Be Solved by Air or Ground Alone

1967:
Airfields



1970:
Surface-to-Air
Missile
Installations



1973:
Mobile Surface-
to-Air Missiles



1991:
Scuds



2006:
Mobile Katyusha
Rockets



2006-2009:
Short-range
rockets



Requires an
integrated
air-ground
approach

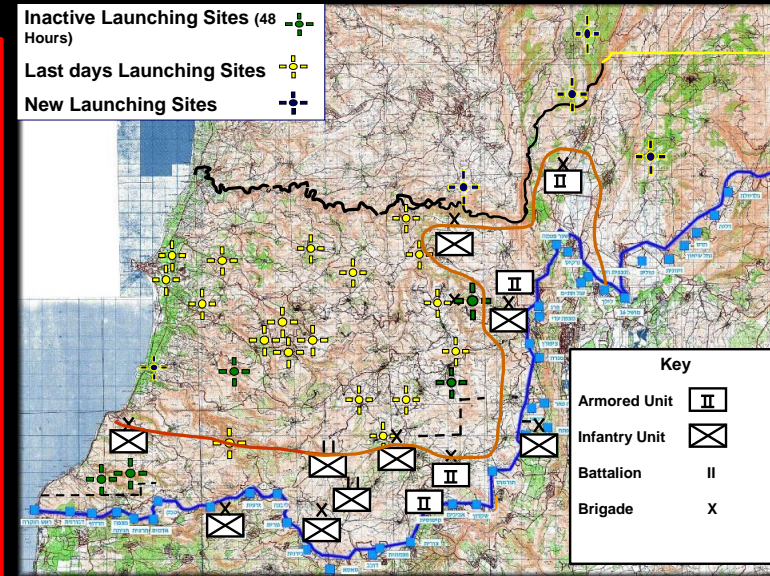
- Size
- Signature
- Price
- Order of battle
- Mobility
- Urban operations



*Source: Israeli Air Force

Insights From Lebanon: Competent Adversaries

- Hezbollah not 10-feet tall but . . . IDF could not solve the problem with existing low intensity conflict skills and mindsets
- Hezbollah required a tightly integrated and joint Air-Ground-ISR solution the IDF could not execute in 2006
- Lebanon War a “wake-up call”—“Back to Basics”
- IDF did not abandon low intensity conflict missions but realized it had to prepare for the full range of operations
- Learning and preparing pay off in Gaza in Operations Cast Lead and Protective Edge



Israeli Ground Forces Final Positions



Hezbollah Rocket Launcher

Insights From Lebanon and Gaza (1)—Enemy and Terrain Matter

- Hybrid opponents, like Hezbollah and Hamas, create a *qualitative* challenge, despite their *smaller size*, because of their
 - Training, discipline, organization, C2
 - Stand-off weapons (ATGMs, MANPADS, mortars, rockets)
 - Use of complex terrain (“nature reserves,” urban) and fighting amongst the people
- Can force change in operational methods (limit helicopter and close air support use)



Insights From Lebanon/Gaza (2)

- Combined arms ground operations are an essential component of operations against hybrid opponents
- Precision, stand-off fires are critical, but not sufficient to defeat hybrid adversaries concealed in complex terrain
- Air-Ground-ISR must be tightly integrated and highly responsive to be effective against relatively small, fleeting targets
- Armor enables infantry to get into the close fight
- Artillery is a key suppression weapon
- Unmanned aircraft and rockets will increase air defense and counterfire challenges
- High intensity combat at brigade and below



The Full Range of Military Operations— The Future Security Environment



Future U.S. capabilities should be linked to potential adversary capabilities across the full range of military operations

“Low-End” Non-State Irregular Adversaries

- Mujahideen (Afghanistan 1979)
- PLO West Bank (2001)
- Al-Qaeda in Iraq (2007)
- Taliban Afghanistan (2009)

State

State-Sponsored Hybrid

Non-State Irregular

- Organization: Not well-trained; little formal discipline; cellular structure; small formations (squads)
- ★ • Weapons: Small arms, RPGs, mortars, short-range rockets, IEDS/mines
- Command and Control: Cell phones; runners; decentralized

U.S. Joint Force, particularly the Army, has focused increasingly on irregular adversaries since 2001—as had the Israelis had before 2006

“High-End” State Adversaries

- Mujahideen (Afghanistan 1979)
- PLO West Bank (2001)
- Al-Qaeda in Iraq (2007)
- Taliban Afghanistan (2009)

Non-State Irregular

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- Weapons: Small arms, RPGs, mortars, short-range rockets, IEDs/mines
- Command and Control: Cell phones; runners; decentralized

State-Sponsored Hybrid

State

- Soviet Union (Afghan 70s-80s)
- Russia (Chechnya 1990s)
- Israel (Lebanon 2006)
- Georgia (2008)
- Russia (Georgia 2008)
- Israel (Gaza 2008)
- United States (Afghan/Iraq 2010)

- Organization: Hierarchical; brigade or larger-sized formations
- Weapons: Sophisticated air defenses; ballistic missiles; conventional ground forces; special operations forces; air forces; navies; some with nuclear weapons
- Command and Control: All means; generally centralized



***Focus was on major combat operations before OIF;
how much the institution remembers is an important question***

Minding the “Middle”—State-Sponsored Hybrid Adversaries

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- PLO West Bank (2001)
- Al-Qaeda in Iraq (2007)
- Taliban Afghanistan (2009)

Non-State Irregular

- Organization: Not well-trained; little formal discipline; cellular structure; small formations (squads)
- Weapons: Small arms, RPGs, mortars, short-range rockets, IEDs/mines
- Command and Control: Cell phones; runners; decentralized

- Mujahideen Afghanistan (1988)
- Chechnya (1990)
- Hezbollah Lebanon (2006)
- Hamas Gaza (2008)
- ISIS (Now)
- Ukrainian Separatists (Now)

State-Sponsored Hybrid

- Organization: Moderately-trained; disciplined; moderate-sized formations (up to battalion)
- ★ Weapons: Same as irregular, but with stand-off capabilities (ATGMs, MANPADs, longer-range rockets)
- Command and Control: Multiple means; decentralized

- Soviet Union (in Afghan 70s-80s)
- Russia (Chechnya 1990s)
- Israel (Lebanon 2006)
- Georgia (2008)
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The United States has not confronted hybrid adversaries since the Vietnam War: high intensity combat challenges that require joint, combined arms fire and maneuver

Air and Ground Across the ROMO—Significant DOTMLPF Implications Across the Joint Force

	Irregular Warfare	State-Sponsored Hybrid Warfare	Deterrence/Major Combat
Role of Air Power	<ul style="list-style-type: none"> Overhead ISR and signals intelligence are crucial because the enemy does not mass. These capabilities are critical to finding and attacking high-value targets. Air mobility is critical to supply and evacuation. Air power is used mostly in ground-directed close air support with tight rules of engagement. It is key for force protection in extremis. Air superiority is contested below 3,000 feet. Above 3,000 feet, air power is mainly invulnerable. 	<ul style="list-style-type: none"> Overhead ISR and signals intelligence are tightly linked with precision strike. Air power is critical to attacking the enemy's deep strike assets and high-value targets. Tight rules of engagement for centralized strikes and close air support are required. Air power is used for the suppression of enemy standoff systems to support (complement) ground maneuver. Air power complicates the enemy's ability to mass and be reinforced. Air superiority may be contested below 20,000 feet. 	<ul style="list-style-type: none"> Air power is critical to deterrence achieved through global reach and strike capabilities. Overhead ISR and signals intelligence are tightly linked with precision strike. Strategic and operational air mobility and tankers are critical capabilities. Air and space superiority may be contested at all levels. Centralized control is critical. Air power precludes large-scale ground maneuver by the enemy. Air bases may be contested. Operations may occur in a nuclear, biological, or chemical environment.
Role of Ground Power	<ul style="list-style-type: none"> Ground power is focused on establishing security, obtaining human intelligence, and training indigenous forces. Maneuver is focused on clearing, holding, and building. Dispersed operations increase the difficulty of force protection. Tight rules of engagement demand rigorous target identification. 	<ul style="list-style-type: none"> Ground power is critical to forcing enemy reaction and to uncovering hidden assets. Combined-arms operations are fundamental to success. Ground power closes with enemy forces. Ground power conducts decentralized operations against dispersed adversaries. High-intensity MCO-like operations are possible at the brigade level and below. Lines of communication may be vulnerable. 	<ul style="list-style-type: none"> Troop deployment is a key signal of national commitment. Combined-arms operations are the key to success. Ground maneuver forces an operational reaction from the enemy. Ground power engages ground units that avoid air attacks and indirect fire. Ground power is critical for exploiting operational opportunities and pursuing enemy forces. Ground power deals with hybrid or irregular threats. Ground power is critical to establishing post-MCO security and stability. Basing and staging may be contested. Operations may occur in a nuclear, biological, or chemical environment.
Level of Air-Ground Integration	<ul style="list-style-type: none"> Operations are ground-centric but highly dependent on air power. C2ISR and joint tactical air controllers are best integrated at lower echelons for direct support. 	<ul style="list-style-type: none"> Balanced operation requires tighter coordination and extensive training and rehearsals. Integration ensures high responsiveness to ground units and integration at levels below the theater. 	<ul style="list-style-type: none"> Air power control is highly centralized. Air superiority is critical to ground maneuver. Integrated suppression of enemy air defenses is key. Supported-supporting relationships depend on the operation; the air or ground commander could lead. Leadership could change during an operation.

Decentralized

Centralized

Why Are Hezbollah and Hamas Important?— “Minding the Middle”

- This is a category of adversaries that the U.S. Army will encounter in the future
- Hybrid adversaries are rising from the ongoing turmoil in North Africa, the Middle East, Ukraine (and could elsewhere—North Korea)
- Strategy: protraction, causing large numbers of casualties, influencing the media—and reluctance of western states to put “boots on the ground” or cause civilian casualties
- Not necessarily “insurgencies”—irregular warfare COIN and “stability operations” may be largely irrelevant
- They often go to ground in urban areas to hide amongst the people



Urban Combat and War “Amongst the People”: Congestion

- In wars between states cities, particularly capitals, often considered a center of gravity
- Large urban areas are central to the future security environment
- Enemy fighting “amongst the people” has decided advantages in the city
- Maneuver channelized and vehicles vulnerable—similar to mountainous terrain
- Almost always costly for your soldiers and remaining civilians—who may number in the millions
- Recent examples: Fallujah and Grozny—city is a military objective that must be taken and cleared; terrorists a cancer that has to be removed



Aachen 1944



Hue 1968



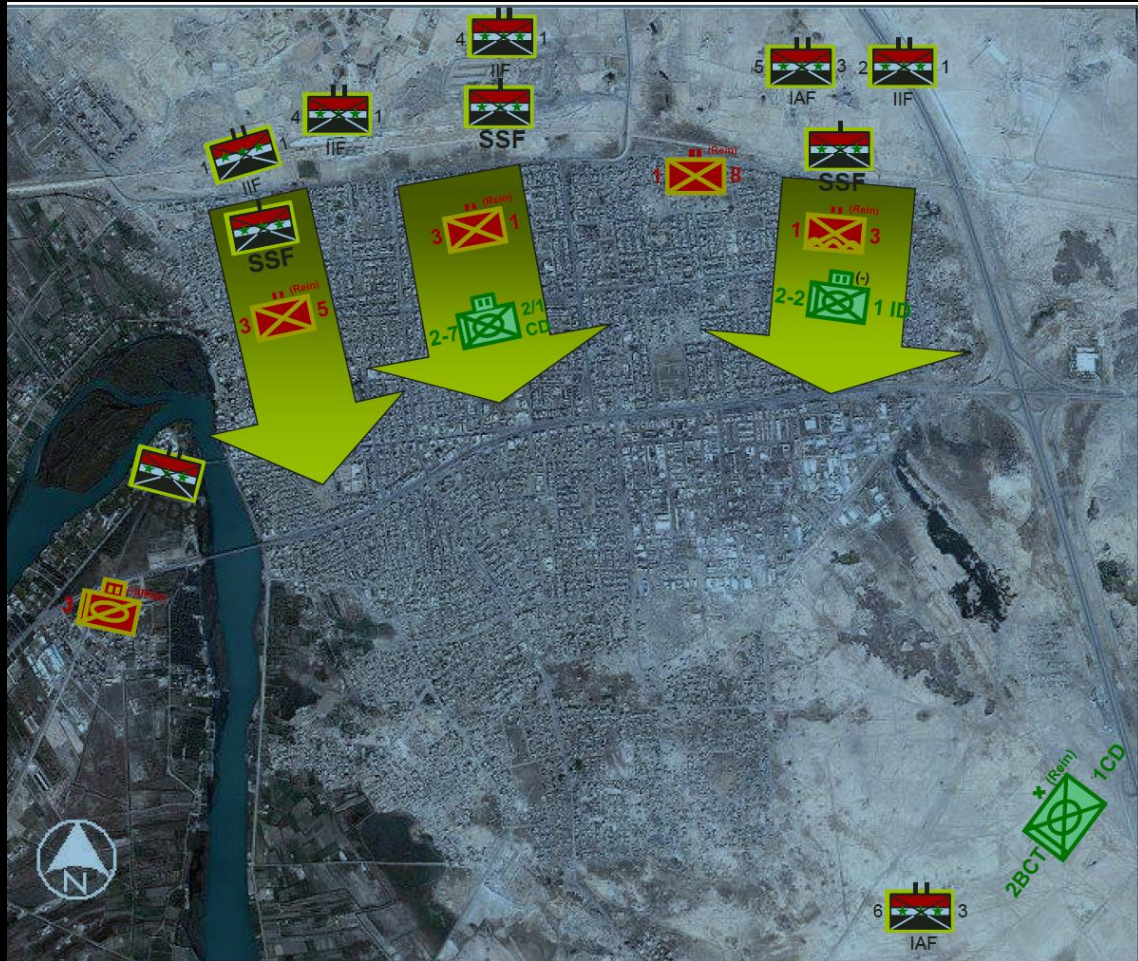
Grozny 1995



Fallujah 2004

Fallujah 2004: Take and Clear the City

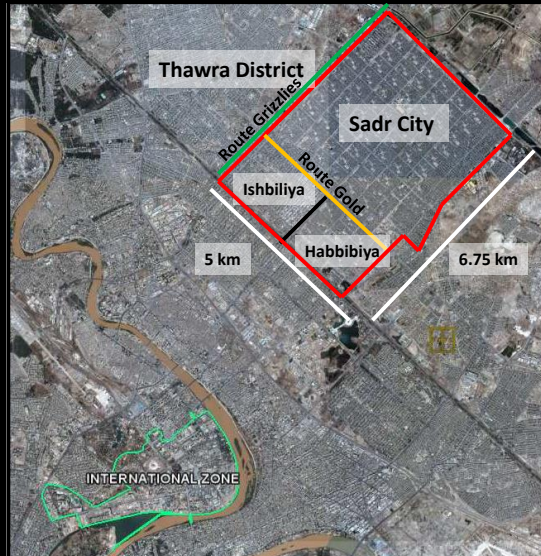
- Geographically isolated
- Before operation Fallujah has population of approximately 300,000
- 270,000 leave before fight.
- Army and Marines fired thousands of 155mm and mortars
- Door-to-door fight
- 3,000 terrorists buried; 4,000 individuals detained
- 80 U.S. dead; 600 wounded



- *Grozny in Chechnya similar to Fallujah: isolated and less than 500k residents—but has multi-story buildings*
- *Sadr City has a much larger population—2.4 Million—with nowhere for non-combatants to go*
- *Gaza City presented similar challenge to Israelis*



A Different Approach: Sadr City and Gaza



Sadr City

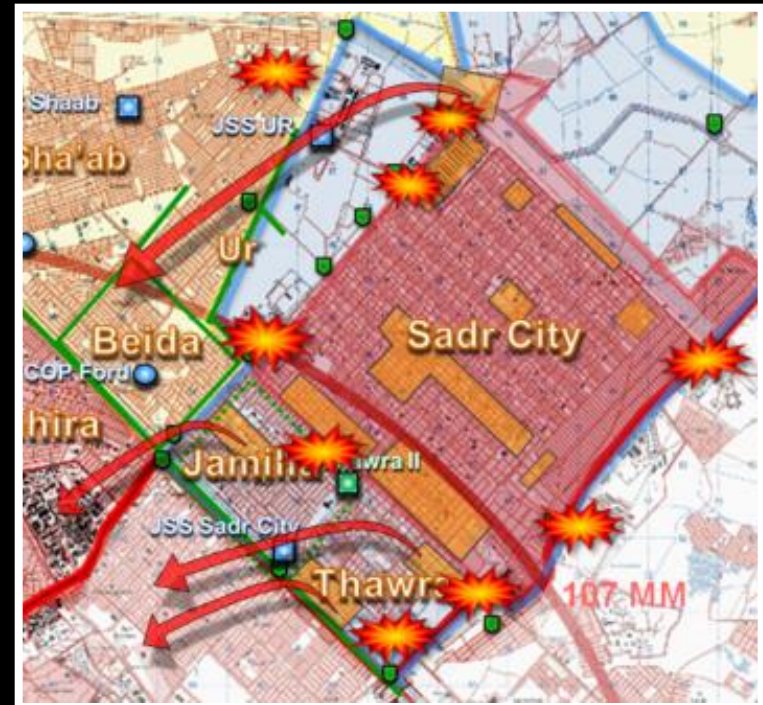
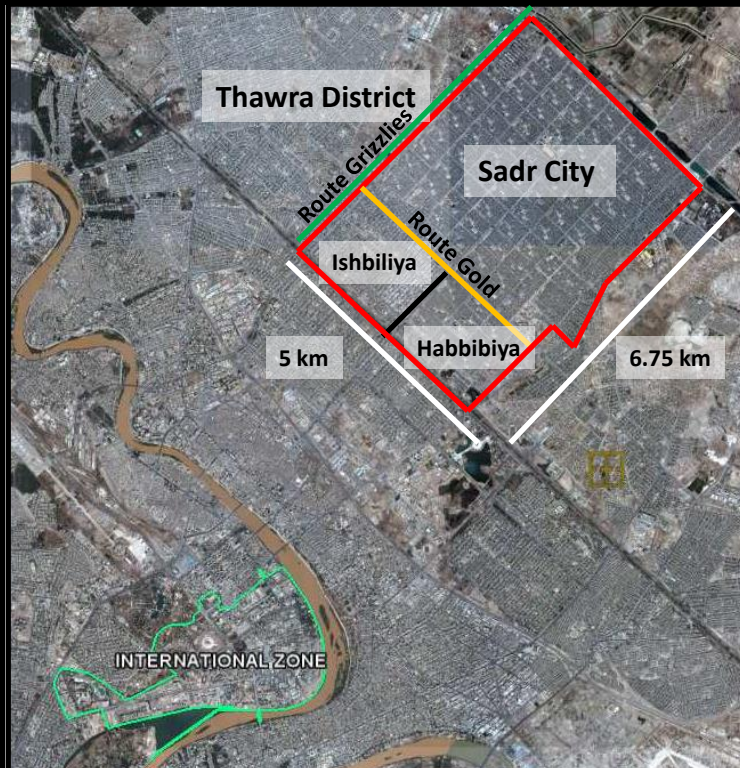


Gaza

“It is *prima facie* better strategy to make the enemy come to you than to go to him and seek a decision on his own ground.” Sir Julian Corbett, *Some Principles of Maritime Strategy* (1911)

Maliki's Basra Operation Triggers Action in Sadr City

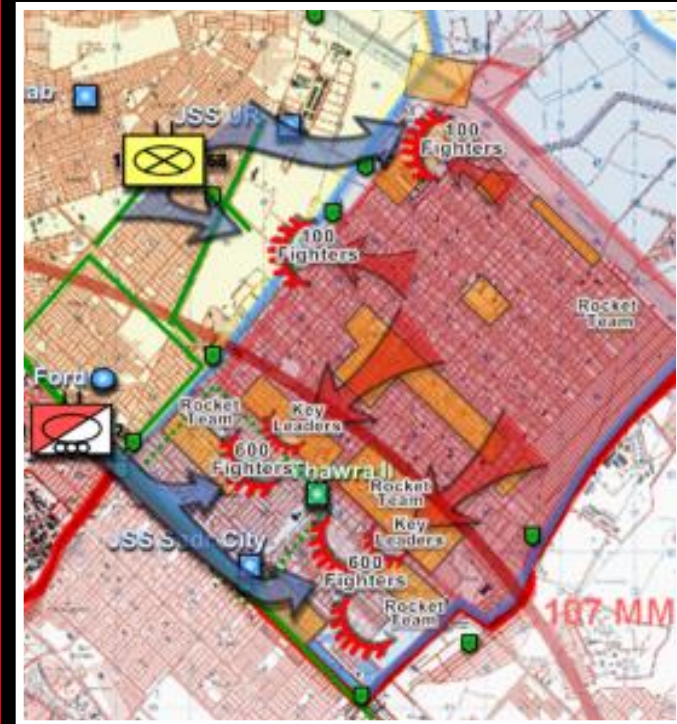
- 23 March 2008: rocket attacks begin against Green Zone (23 to 31 March: 86 Rockets fired)
- 25 March:
 - Government of Iraq offensive in Basra begins
 - Muqtada al-Sadr lifts Aug 2007 cease fire; militias attack Coalition and Iraqi Army outposts across Baghdad
 - Half of Iraqi Army checkpoints near Sadr City are overrun
 - Prime Minister Maliki directs Iraqi Army and Coalition forces to stop rocket attacks and defeat criminal militias in Sadr City



25 March Attacks

MISSION: The 3rd Brigade Combat Team, in partnership with 11th Iraqi Army; the Adhamiyah, Sadr City, and Istiqlal Iraqi Police; and the local government, defeats AQI and Special Group Criminals, and supports growth and economic capacity to *protect the population* and enable transition to civil control.

- Decisive Terrain: 107mm rocket firing points
- 1-2 SCR seizes firing positions south of Phase Line Gold; takes 2 weeks rather than the planned 2 days
- 1-68 CAB seizes Route Grizzlies
- Enemy in prepared positions: sandbags, sectors of fire
- 6 Strykers lost in 6 days—not a fighting vehicle
- Armor (Abrams and Bradleys) moved in—survivable, lethal, intimidating
- 5 Additional companies surged to 3-4 BCT
- 6 April - 11th Iraqi Army Division reaches Route Gold
- Enemy continues to infiltrate across Phase Line Gold

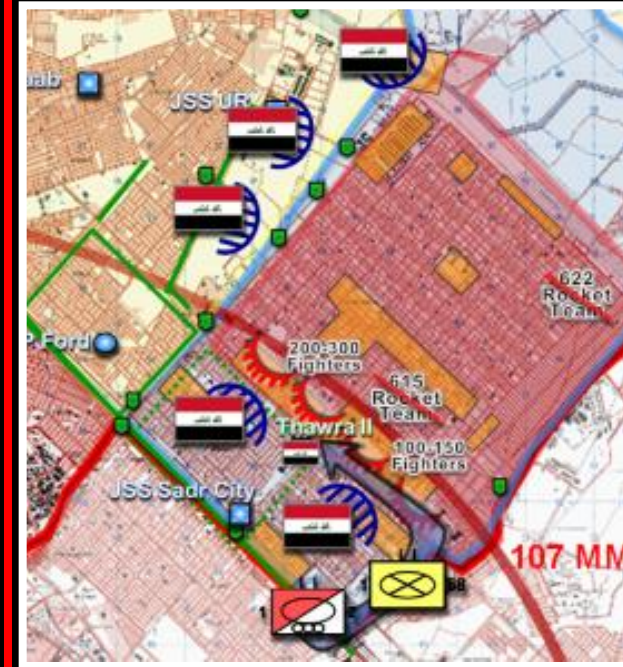


“I stopped counting the reported dead after [my company] hit 100 enemy KIA on the 25th”

Company Commander, 1-2 SCR

The Decisive Fight: Operation Gold Wall (15 April-15 May)

- Concrete barrier (Gold Wall) built to deny enemy maneuver and key terrain south of PL Gold—107s cannot range Green Zone from north of PL Gold
 - Deliberate combined arms breach every day to build wall.
 - 4.6 kilometers long; 3,000 12-foot-tall T-Walls (9 tons each)
 - 2 battalions in continuous operations: 24 April-15 May
- Wall “agitates the enemy”—JAM attacks to stop its construction; plays to U.S. strengths
- “Like a Roman siege engine”
- Sadr ends fight with ceasefire
- Maliki now has the best security forces in Iraq and can consolidate power



818 120mm tank and 12,091 25mm rounds fired—over 700 JAM KIA.



JAM attacks U.S. forces in a position of advantage and is decimated

IDF Approach in Gaza Similar to Sadr City

- Cut off City
- Make Hamas come out and fight
- Puts IDF in position of advantage
- Degrade Hamas and leave



Biggest challenge in Cast Lead and Protective Edge was Gaza City—IDF did not take it—went after Hamas targets with discriminate fires

Urban Fighting: Insights from Sadr City and Gaza

- Focus is enemy fighters and their capabilities: more a “wide area security” than “take and clear” mission.
- Must make the enemy visible within a sea of noncombatants.
- Done by creating a situation that is intolerable to the adversary (walls, blocking forces, raids).
- Snipers and counter-sniper operations important.
- Hunting enemy leaders key to setting conditions—disorganizes the enemy and keeps changing middle management—SOF must be integrated.
- Enemy is fleeing:
 - Decentralized decision making (mission command) fundamental.
 - Pushing capabilities to brigade and below important for responsiveness



Sadr City



Gaza

Mobile protected firepower is essential in urban combat and against hybrid adversaries

Maneuver Leaders Must Know How to Employ All Arms

- Joint combined arms fire and maneuver—with armor—key to defeating dispersed hybrid opponents, particularly in urban fights
- Must fight through and neutralize stand-off fires (ATGMs, MANPADS, mortars, rockets) to be able to get into the close fight.
- Responsive artillery key for fires—attack helicopters and close air support may be limited by MANPADS and ADA.

Conflict	Use of Armor—Hybrid Wars
Vietnam	<ul style="list-style-type: none"> • Medium armor (M113s) useful throughout theater • Tanks useful as assault guns • IEDs/mines: 11th Armored Cavalry Regiment (June 1969 to June 1970) lost 352 combat vehicles
Chechnya	<ul style="list-style-type: none"> • Russians use armor throughout conflict • Grozny's Urban canyons present issues • Combined arms and training key; tank—infantry coordination key (relearn WWII lessons)
Lebanon	<ul style="list-style-type: none"> • Hezbollah stand-off requires combined arms • Being good at low end does not prepare force • Stand-off fires (air/artillery) do not solve problems posed by Hezbollah's defense and short-range rockets • Key IDF lesson: only armor can operate on this type of battlefield • Add more Merkava IV tanks and the NAMER IFVs to the IDF
Gaza	<ul style="list-style-type: none"> • Tanks and APCs used throughout the operation • Brigade-centric combined arms approach with integrated air power • Armor used for battlefield logistics • Used modified T-55 IFVs (Achzarit) pending fielding of Namer



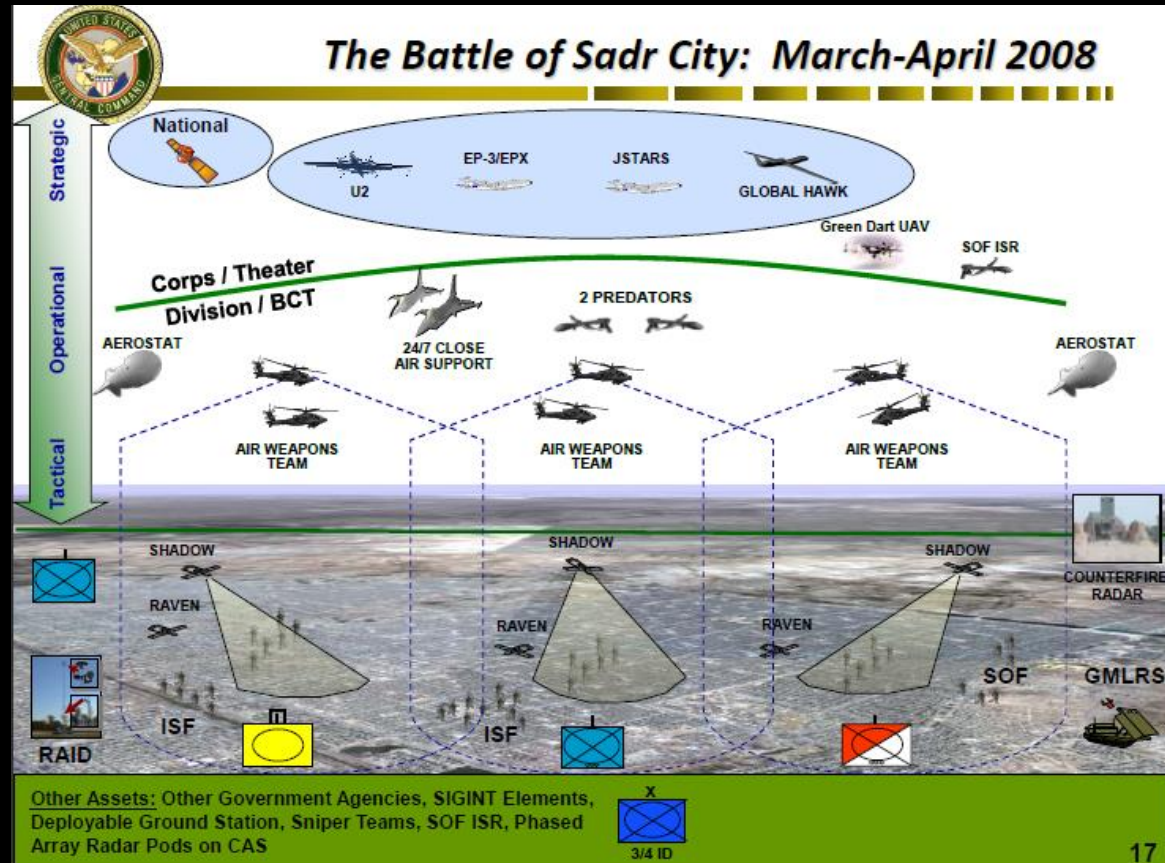
Chechnya



Gaza

Insights from Sadr City: Urban Combat is a Joint Challenge

- Persistent ISR and responsive precision air strike (attack helo, fixed wing, UAV) capabilities fundamental and must be integrated:
 - Important to show proportionality and deliberateness
 - Key to attacking targets “amongst the people”
 - Lessens exposure of your soldiers to risks of urban combat
 - Only fixed wing with large bombs can destroy large targets (buildings, tunnels)



Final Thoughts

- Potential adversaries know our capabilities—and vulnerabilities—and are adapting
- Future challenges require joint forces
 - Prepared for a range of adversaries—irregular, state-sponsored hybrid, and state
 - Prepared for operations in complex terrain, particularly large urban areas—with the adversary operating “amongst the people”
 - Capable of joint, combined arms, fire and maneuver
- Balanced ground force key:
 - Armor (tanks/IFVs/APCs) matters against adversaries with stand-off fires
 - Dismounted Infantry fundamental to close fight
 - Field Artillery and Air Defense Artillery key for success against competent adversaries
- *Scale matters*—it takes Soldiers to control complex terrain in large areas

