



# Info-War Invades Iraq

BY JOHN C. WOHLSTETTER

On a single horrific night in March 1945, more than 300 B-29 Superfortress bombers saturated Tokyo with napalm and incendiary explosives. The resulting firestorm devoured a quarter of the city, leaving at least one hundred thousand civilians dead and countless others hideously wounded. Major Gen. Curtis LeMay, who ordered the Tokyo raid—and who a generation later argued that in targeting North Vietnam, U.S. aircraft should “bomb them back into the Stone Age”—lived in a less sensitive, less media-saturated era. No American leader will ever again have the leeway LeMay had to prosecute an air war.

No matter. Information technology has boosted U.S. forces to warp speed, in the process transforming old certitudes about war. In Desert Storm it took as much as two days from target selection to take-out, and only one in five planes had smart-bomb capability; today all do. In Gulf War II, the opening air strike involved but a few hours of decision making; the second “leadership” strike against Saddam Hussein himself spanned forty-four minutes from decision to execution—only twelve minutes to reroute B-1B bombers from a less-valued target. In Iraq, more than two-thirds (68 percent) of all U.S. bombs were “smart”—nearly ten times the first Gulf War’s percentage.

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President Bush, speaking in May from the deck of the carrier *Abraham Lincoln*, summed up the impact of precision:

In the images of falling statues, we have witnessed the arrival of a new era. For a hundred years of war, culminating in the nuclear age, military technology was designed and deployed to inflict casualties on an ever-growing scale. In defeating Nazi Germany and Imperial Japan, Allied forces destroyed entire cities, while enemy leaders who started the conflict were safe until the final days. Military power was used to end a regime by breaking a nation.

Today, we have the greater power to free a nation by breaking a dangerous and aggressive regime. With new tactics and precision weapons, we can achieve military objectives without directing violence against civilians. No device of man can remove the tragedy from war; yet it is a great moral advance when the guilty have far more to fear from war than the innocent.

To a degree that would no doubt have stunned Gen. LeMay—and that no doubt frustrated Saddam's supporters last March—the air campaign in Iraq entirely avoided major mass-casualty mistakes. Weapons were selected specifically to minimize collateral damage. Viewers around the world saw the video of a tank destroyed under a bridge while leaving the span untouched. A lone sniper on a Baghdad rooftop was picked off by an A-10 Thunderbolt's 30-millimeter cannon, avoiding damage to the building itself. Helicopter-fired Hellfire missiles were fitted with thermobaric mini-warheads, creating fierce fuel-air explosions that can destroy the first floor of a building while leaving upper floors intact. For good measure they can also strike targets around corners, vital for urban battlegrounds.

Complementing precision is what the U.S. military calls "battle-space awareness": the ability to visualize a battlefield in real time—instantaneously, as it unfolds—and in three dimensions. Largely absent in 1991, this capability, the Manhattan Institute's Peter Huber argues, is the most important change in the intervening decade. Broadband electromagnetic devices penetrate fog, dust, smoke, and foliage; light, heat, and radio waves betray enemy forces, picked up by both passive and active sensors. "The 'fog of war' is giving way to extraordinary power to formulate images and collect information," says Huber. "Call it omni-spectral sensing." The combination of sensor awareness and sensor guidance gave coalition forces a precise lethality that simultaneously stunned and shattered opposing units.

The information flood doesn't stop there. Pilotless drones—Unmanned Combat Aerial Vehicles, or UCAVs—

are expected to comprise a third of all U.S. military aircraft within a decade. The full-sized Predator and Global Hawk made their combat debuts over Afghanistan. In Iraq an experimental robot plane dubbed the "Silver Fox"—six feet long, weighing only twenty pounds, and developed in less than a year—is cruising the skies on the lookout for guerilla threats. Hand-launched and controlled by local commanders on the ground, it carries high-resolution color and black-and-white cameras, plus infrared sensing. Disassembled, it fits in a case the size of a golf bag.

Even manned flight is increasingly unmanned, and therefore dependent on machines: on a thirty-four-hour B-2 bombing "run" from Missouri to Baghdad and back, the crew's hands-on flying time is measured in minutes—computers and ground monitors do the rest. One expert breaks down mission tasks into hours, minutes, and seconds, with computers taking over the hours (repetitive) and seconds (too fast for humans) and humans still providing the minutes (judgment).

These new capabilities are driving the U.S. military's communications needs through the roof. Gulf War I's networked data demands were estimated at 192,000 words per minute. Military links for Gulf War II included the Guidance Apportionment and Targeting Unit, located in central Saudi Arabia; with more than twenty-four miles of high-speed cable, it carried 800 megabits per second of tracking and surveillance data to 3,000 on-premises computers. Total military and commercial bandwidth employed during the war was 783 megabits per second—the equivalent of seventy-eight typical corporate data networks. Overall, estimated bandwidth usage was *thirty times* greater than Desert Storm. Another study puts the U.S. military's emerging bandwidth needs at 1.5 *trillion* words per minute, equivalent to sending the Library of Congress each minute.

### "SPEED KILLS"

General Tommy Franks's favorite maxim encapsulates another extraordinary attribute of information-rich, real-time operations: the ability to "get inside the enemy's decision cycle." Simply put, making a strategic targeting decision in minutes from target identification to "Bombs away!" requires ubiquitous information processing and communications technologies. Info-poor adversaries facing such a force are effectively blind, deaf, and dumb. It is this instantaneous sharing of vast pools of data and analysis that enables what Defense Secretary Donald Rumsfeld terms "jointness"—truly integrated operations of air, land, and sea forces. Few of our allies' military organizations can be woven into this web and operate at our tempo; no adversary is even close.

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### Digital deception could be the info-war equivalent.

A key imperative is that military personnel be trained to operate like this and that they have the tactical latitude to do so—a given in “high-trust” societies like the United States, but not in “low-trust” societies like Saddam’s Iraq. American troops have long been known for precisely that. In 1943 General Erwin Rommel said: “What was really amazing was the speed with which the Americans adapted themselves. . . . They were assisted in this by their tremendous practical and material sense and by their lack of all understanding for tradition and useless theories.” More than half a century later, retired general Wesley Clark, in his book on the Kosovo conflict, recounts how French diplomats were flummoxed when he explained why it would be impractical for military commanders to report directly to diplomats on the ground rather than to NATO command.

Speed involves linking battlefield observation and remote expertise. A few days before reaching Baghdad this spring, the U.S. Army’s Eleventh Signal Brigade, running out ahead of the Third Infantry Division, encountered six dead sheep spread along a mile of roadside. Suspecting a possible chemical attack, soldiers used Microsoft Chat over the military’s proprietary Secret Internet Protocol Router Network to query Forward Command, 200 miles away. A chemical warfare expert replied that locals commonly drag dead sheep off the road and leave them, and, that unless air quality was degraded, to assume no chemical danger. Back to the fight they went.

SIPRNet is part of the Pentagon’s Global Command and Control System—GCCS, or “geeks” to the grunts. Every friendly soldier and notable piece of equipment can be tracked worldwide—along with any enemy encountered—on a remotely accessible digital map. Battle images, captured in digital video, are uploaded to the Warfighting Web portal, which went online in mid-2002; remote commanders can summarize the engagement and post further instructions. Indeed, in today’s U.S. military, not being connected can be fatal; one of the faults that led to the celebrated capture of Army Pvt. Jessica Lynch in Iraq and the deaths of six of her fellow soldiers was that their maintenance unit lacked the equipment to receive real-time update on a convoy route change.

#### CROSSING CULTURAL LINES: CONNECTING VIA VIVID VIDEO

**T**he sound-and-light “Bombs over Baghdad” show that kicked off Gulf War II featured more vivid TV imagery than the fuzzy images of 1991, but it was a difference in degree, not in kind. What differed fundamentally from all prior conflicts was the availability of live video from the battlefield. Not least of the consequences was a narrowing of the much-lamented cultural disconnect between the diminishing segment of the U.S.

population that serves in the military and the rest of the American people.

This author has hardly been alone in thinking that vivid, on-scene television coverage of wars undermines the will of modern liberal democracies to fight. It was in that belief—and with memories of the disastrous two-scorpions-in-a-bottle relationship between the military and the press in Vietnam—that the military barred the press from direct access to its field operations in the first Gulf War.

Even worse was when the enemy could take command of the airwaves. In 1991, F-117 stealth fighters struck the *al-Firdos* shelter near Baghdad, a facility that in fact served a dual purpose: civilian shelter and hideout for Iraqi leadership. Intelligence subsequently established that a senior Iraqi official and a third of his staff had been killed, but so had several hundred civilians. The civilian deaths were immediately trumpeted by the Iraqis as evidence of America’s callous disregard for innocent life. As a result, for the final fortnight of the conflict bombing in and around Baghdad was severely restricted, with every mission requiring approval by CENTCOM commander Gen. Norman Schwarzkopf and Joint Chiefs of Staff Chairman Gen. Colin Powell.

In 2003 the Bush administration realized early that it would face similarly slanted anti-U.S. coverage by Arab media, including the strong possibility that Saddam’s troops would likely commit humanitarian violations against his own people and blame coalition forces (as his *fedayeen* thugs in fact did). Hence the decision to “embed” reporters with combat troops from day one to provide independent verification of what was actually happening on the battlefield.

Viewers back home in America—and just as important, around the world—got a glimpse of real firefights. But far more important was the impression coalition forces made: courageous, disciplined, focused, decent. A military any civilized person could be proud of, one whose soldiers put themselves in the line of fire to rescue trapped civilians. America’s warrior class, an all-volunteer fraction of its industrial-age predecessors, established an emotional bond with ordinary people both at home and abroad that will pay dividends for years to come.

#### HOUSE OF MIRRORS: OVER THERE—SHOOT!

**T**he earliest voice synthesizer made its public debut at the System Exhibit at the 1939 World’s Fair (another Bell innovation was there too: television). The *Voder* enabled a keyboard operator to create intelligible speech. Sixty years later Americans watched bemused as one tape after another surfaced during the first confused weeks of the Iraq war purporting to show Saddam alive and well. Was it Saddam or one of his dozen

doubles? And what of Saddam's two psycho sons? Intelligence agencies could not agree.

Future wars could see far worse—indeed, possibly nightmarish—“spoofing” strikes. Digital computer technology, voice recognition and synthesis, and other virtual reality tools will only get better, cheaper, and more readily available around the world. Soon it will be possible to take video footage of a public figure and confect out of syllables, sounds, and gestures a complete faux speech. Imagine if Saddam's minions had created a speech ostensibly by President Bush in which a series of foul libels are hurled against Islam and Arabs? And, of course, broadcast around the world by satellite over the now-famous Qatar-based Arabic news network al-Jazeera.

Just as biological weapons have been called “the poor man's atomic bomb” so could digital deception be “the poor man's info-war bomb.” While not staving off military defeat, successful use of such digital weapons can render a battlefield victory Pyrrhic. Countermeasures—jamming false transmissions in real-time, secure digital watermarks—can help neutralize this. When al-Jazeera went over the top with trumped-up allegations of American aggression against civilians, anonymous hackers responded by taking down the network's English-language online edition, planting a virtual American flag in its place. But even then, a hostile foreign public may well trust the digital lie.

In the final scene in *The Lady From Shanghai*, the 1947 Orson Welles masterpiece, protagonist Welles finds himself in the center of a room in a funhouse, surrounded by mirrors. He hunts his antagonist, Everett Sloan, whose image maddeningly appears in one mirror after another. Welles fires, shattering glass panes in succession, a cinematic ballet of violent desperation. Finally, Welles shoots and hits the real target. That may well be part of any future info-age war: more pseudo-images to shoot at than we can possibly cover.

## OCEANIA, EURASIA: 1984 IN THE TWENTY-FIRST CENTURY

**O**n October 1, 1918, the Australian Fifth Cavalry entered Ottoman-ruled Damascus and were welcomed as liberators. The Aussies were in fact en route to Homs, a hundred miles away, and their entry was contrary to Allied plans that Arab forces be the first to enter Damascus. British troops arrived the following day, including T. E. Lawrence, whose design it had been that Arab forces of Britain's Hashemite ally, the Emir Feisal, enter first, thereby establishing a postwar claim. Unfortunately, the ersatz liberation did not deter France from insisting on her colonial prerogatives. Nevertheless, it demonstrated early media-management thinking by the British. You could do stuff like that before CNN.

The Iraqi minister of information, dubbed “Baghdad Bob,” provided American audiences with some genuine entertainment as U.S. forces rolled toward Baghdad. Jay Leno would be hard pressed to top some of his lines. Coalition forces being hurled back two hundred miles

from the airport by Iraqi counterattack! One expected to hear next that Saddam had made an end run and was leading the Saladin Division on a march from Manassas to Washington.

Laugh we did. Arab audiences didn't. They saw a war narrative inverted 180 degrees from the truth: heroic defenders battling barbaric invaders who inflicted mass casualties on the Iraqi population. Super-precise weapons sparing surrounding buildings and inhabitants, marines rescuing Iraq civilians from crossfire, mosques turned into forts—none of this reached Arab viewers, at least not initially. In effect, a parallel information universe was created.

According to Marc Ginsberg, former U.S. ambassador to Morocco, al-Jazeera began each war report with a picture of a U.S. plane said to be targeting an Iraqi child. Arab populations are deeply suspicious of America—many believe that 4,000 Jews stayed home from work at the World Trade Center on 9/11 because the Mossad tipped them off about the attack that it was launching (together with the CIA, of course).

Countering this parallel media world will prove a challenge, in peacetime as well as war. To its credit, al-Jazeera did allow senior U.S. officials access to its viewers, including Colin Powell and Joint Chiefs Chairman General Richard Meyers. And when live scenes were broadcast of Iraqis pulling down Saddam's statue in central Baghdad, it served as an unmistakable counternarrative and signaled the endgame of the conflict.

But increasingly the answer may have to be alternative, decentralized private media. Fax transmission bypassed Chinese censorship in 1989, giving protesters in Tiananmen Square two-way access to the outside world; e-mail and the Internet were factors in organizing opposition to Serbian strongman Slobodan Milosevic in 1999, laying the foundation for Milosevic calling an election he mistakenly thought he would win. Fax and Internet access provide some channels in the Mideast, especially to more Westernized elites. But overall Internet access in the region is typically in the low single-digit percentage; al-Jazeera reaches 35 million people, government stations millions more.

Boosting Mideast Internet use is vital to breaking the stranglehold hostile governments have on the dissemination of news. Indeed, prewar Iraq had the lowest Internet penetration in the Arab world—an estimated 250,000 users and only 25,000 home accounts. Access was restricted to state-sanctioned sites and services. Total bandwidth for the entire country was 10 megabits per second, equal to a single standard U.S. local area network. Nor did the war immediately help: by the time coalition forces took control, looters had stripped the country's estimated sixty-five Internet cafes.

Americans, by contrast, made Operation Iraqi Freedom their first Internet war. Of the estimated 116 million online Americans, a survey by the Pew Internet and American Life Project found that 17 percent used the Web as their pri-

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mary news source during the Iraq war, versus only 3 percent on September 11, 2001; overall 77 percent used the Net for war information, with more than half also e-mailing friends about war topics.

Online users have not abandoned other media: their use of traditional media is only slightly lower than the Internet crowd: television (87 percent versus 89 percent); newspapers (21 percent versus 24 percent); and radio (actually higher, 22 percent versus 19 percent). Ironically, the most widely accessed Web sites were those of American television networks, at 32 percent; newspaper sites were next at 29 percent, followed by U.S. government sites at 15 percent and foreign news sites at 10 percent. Only 17 percent of users said online use gave them a different perspective than that obtained from traditional sources. War opponents were more likely to use online resources, but war supporters nevertheless outnumbered them online.

One intriguing use of the Net was as an instant grapevine for Iraqi expatriates worldwide; Iraq.net, started in 1995, links exiles living in America, Canada, England, Australia, and Switzerland. The Iraqi Forum for Democracy, run by the Iraqi National Congress, is serving as a clearinghouse for ideas about rebuilding the country.

To date, though, the United States has made but minimal effort to use the Net—or anything else—to try to counter the parallel universe problem and to sway Mideast hearts and minds. American Enterprise Institute resident scholar Joshua Muravchik presents a dismal chronicle of post-Reagan sloth, driven by an unholy trinity of deficit hawks, isolationist conservatives, and left-wing anti-Americans, all combining to gut the Cold War programs that proved so successful in undermining Soviet propaganda. The U.S. Information Agency has been downsized and folded into State's unfriendly bosom. Hapless ad woman Charlotte Beers, briefly under secretary of state for public diplomacy, chose as her first step to promote "mosques in America"; that many of these were funded by extremist Wahhabi foundations in Saudi Arabia apparently missed everyone's radar. Radio *Sawa*, recently launched, broadcasts pop music and little news, unlike the old Voice of America, which used jazz (better music) to attract listeners to serious news. Incredibly, Arabic-language VOA broadcasts were stopped when *Sawa* was launched, thus reducing the amount of Arabic-language programming the United States puts out.

### "REACH OUT AND TOUCH SOMEONE" OR "YOU'VE GOT MAIL"

In the weeks before coalition troops rolled across the Iraqi border, U.S. intelligence agencies contacted key Iraqi commanders and other officials by cell phone and e-mail, warning that they would be held

responsible for their actions—destroying oil fields or other infrastructure, or launching chemical or biological weapons. On the other hand, a March 24 raid by Apache helicopters was turned back by massed small-arms fire, reportedly organized on the fly by an Iraqi general who used his private cell phone to speed-dial area commanders. The result was a rare setback for U.S. forces.

Civilian communications networks have a curious history in recent wars. During the 1983 Grenada operation, a U.S. Army officer whose field radio could not reach a navy carrier offshore used a pay phone and a personal credit card to call to his headquarters at Fort Bragg and request air support. On the other hand, in 1996, Russians killed Chechen leader Dzhokhar Dudayev with a missile that honed in on his cell phone.

But pervasive public communications carries more subtle risks as well. Retired military officers working as TV's "talking warheads" can influence the course of events on the battlefield (not to mention inside Washington). Broadcasting an enemy's strategic or tactical errors on global satellite television gives foes a chance to change course. Unduly optimistic assessments, on the other hand, can have the opposite effect: reassuring an adversary lacking his own solid battlefield intelligence that his strategy is in fact working. Mass media can be capricious, but in any event the era of tightly controlled wartime media has clearly ended.

### INFO-WAR AND THE FUTURE: AMERICAN PREMINENCE?

Information technology assets do indeed make America truly the "hyperpower" that former French foreign minister Hubert Védrine resentfully called it. The order-of-magnitude gap between hyperpower and lesser military allies and rivals is clear. If America stays the course, producing and adapting advanced information technology assets for military use, the current gap will only widen.

The info-war news from Iraq is mostly good news for those fighting to deny terror states and their surrogates access to weapons of mass destruction. Communications networks and smart weaponry enable advanced societies to fight modern wars in a manner consonant with their core civilizational values. The availability of viable, swift, targeted military options will deter the nonsuicidal from launching attacks on America and her allies and enable better carrying out of search-and-destroy missions against the suicidal, apocalyptic terror set. And if our educational system ever performs one-tenth as well as does the military, we will begin turning out generations of Einsteins. Alas, don't bet the farm on this. 🐾