

# America's Cyborg Warriors

By [Tom Burghardt](#)

Global Research, July 23, 2008

[Antifascist Calling...](#) 23 July 2008

Region: [USA](#)

Theme: [Police State & Civil Rights](#)

As the costs of imperialist war skyrocket, securocrats find themselves under the gun so to speak, of corporate and Pentagon masters demanding “results.”

No matter that the solutions sought are for “smart” weapons—particularly those that “think”—systems they believe capable of dominating global south and “homeland” cities. This quest for technological mastery has been dubbed by Pentagon theorists as “network-centric warfare” (Rumsfeld’s “Revolution in Military Affairs” [RMA]) a “transformational” process that turn cities, *any city*, into a limitless “battlespace.”

Indeed, current U.S. Army doctrine for fighting in urban environments define the problem as central to U.S. “national security,”

As urbanization has changed the demographic landscape, potential enemies recognize the inherent danger and complexity of this environment to the attacker, and may view it as their best chance to negate the technological and firepower advantages of modernized opponents. Given the global population trends and the likely strategies and tactics of future threats, Army forces will likely conduct operations in, around, and over urban areas—**not as a matter of fate, but as a deliberate choice** linked to national security objectives and strategy, and at a time, place, and method of the commander’s choosing. ([Urban Operations](#), Field Manual No. 3-06, Headquarters, Department of the Army, Washington, D.C., October 26, 2006) [emphasis added]

Key to RMA is the belief that contemporary military operations aim for defined effects and that it is now possible for U.S. forces to defeat adversaries through a combination of surveillance technologies, devastating firepower and the suppression and degradation of communications networks. Durham University geographer Stephen Graham has deemed such notional irrationality by U.S. war planners “technophilia.” Graham [avers](#):

[S]uch technophilic discourses depicting an RMA ushering new relatively reduced-risk, ‘clean’ and painless strategy of US military dominance assumed that the vast networks of sensors and weapons that needed to be integrated and connected to project US power would work uninterruptedly. Global scales of flow and connection have thus dominated RMA discourses; technological mastery, omnipotent surveillance, real-time ‘situational awareness’, and speed-of-light digital interactions, have been widely portrayed as processes which, intrinsically, would usher in US military ‘Full Spectrum Dominance’, on a planetary scale, irrespective of the geographical terrain that was to be dominated. (“From Space to Street Corners: Global South Cities and US Military Technophilia,” Unpublished paper, 2007)

Bloodied by “facts on the ground” in Iraq and Afghanistan however, and despite imperialism’s much-vaunted technological superiority, America’s techno-warriors continue searching for “Holy Grail” solutions to the *political* quandary they have confronted since the Vietnam war: how to achieve “victory” in environments that have proven themselves deadly quagmires, humiliating object lessons *never learned* by the world’s sole “hyperpower”?

In a world of supercomputers, complex algorithms and emerging nanotechnologies, the Pentagon’s research arm, the Defense Advanced Research Projects Agency (DARPA) is the “tip of the spear” that our capitalist masters are banking on to “win” the “war on terror.” And in this world, surveillance is the gateway and ubiquitous key to controlling the counterinsurgency “battlespace.”

Portrayed in media accounts as a “gee-whiz” agency of nerds and quirky misfits, DARPA researchers were instrumental in designing-or appropriating for military use-the surveillance technologies deployed by the National Security Agency (NSA) under president Bush’s so-called “Terrorist Surveillance Program.”

As Tim Shorrock points out in his essential book, [\*\*\*Spies For Hire: The Secret World of Intelligence Outsourcing\*\*\*](#), DARPA “money...funded some of the NSA’s first data mining programs.” Indeed, Shorrock reported recently in [\*\*\*Salon\*\*\*](#) that the NSA’s surveillance program is directly tied into state “Continuity of Government” planning including use of the Main Core database,

According to several former U.S. government officials with extensive knowledge of intelligence operations, Main Core in its current incarnation apparently contains a vast amount of personal data on Americans, including NSA intercepts of bank and credit card transactions and the results of surveillance efforts by the FBI, the CIA and other agencies. One former intelligence official described Main Core as “an emergency internal security database system” designed for use by the military in the event of a national catastrophe, a suspension of the Constitution or the imposition of martial law. Its name, he says, is derived from the fact that it contains “copies of the ‘main core’ or essence of each item of intelligence information on Americans produced by the FBI and the other agencies of the U.S. intelligence community.” (“Exposing Bush’s historic abuse of power,” *Salon*, July 23, 2008)

The secretive nature of the program is so highly sensitive, Shorrock reports, that when a former senior Justice Department official mentioned Main Core to an intelligence analyst stationed inside the White House after the 9/11 attacks “he turned white as a sheet.” One can only wonder what role DARPA and their “outsourced” corporate partners played in updating Main Core or programs similar to it.

### **Like *The Minority Report*, Only Scarier**

Unfortunately, we don’t have to look very far to discover traces of these all-encompassing surveillance projects.

One example was a 2003 DARPA program called “Combat Zones That See” (CTS). The plan was to install thousands of digital CCTV networks across occupied cities in the belief that once the system was deployed they would provide “warfighters” with “motion-pattern analysis across whole city scales.” CTS would create a nexus for mass tracking of individual cars and people through algorithms linked to the numeric recognition of license plate

numbers and scanned-in human profiles.

The program was denounced by privacy and civil liberties advocates' for its potential use as a mass surveillance system that could just as easily be deployed on the streets of American cities. In theory CTS, or a similar program *could* be further "enhanced" by Scaleable Network Social Analysis (SSNA), originally designed for DARPA's infamous Information Awareness Office run by convicted Iran-Contra felon John Poindexter.

SSNA's aim is "to model networks of connections like social interactions, financial transactions, telephone calls, and organizational memberships," according to the Electronic Frontier Foundation's 2003 [analysis](#). Once license plate numbers are "mined" from raw CCTV footage, investigators could: a) identify a car's owner; b) examine her/his web-surfing habits; c) scan e-mail accounts for traces of "inflammatory rhetoric;" d) monitor recent purchases for "suspicious" items.

After the program was uncovered, all traces of CTS have since disappeared from DARPA's [website](#). However, the program has been farmed-out across the agency. I will explore some of the "innovative" solutions that DARPA securocrats are investigating to "improve" imperialist "warfighting" capabilities, particularly those falling under the purview of Military Operations on Urban Terrain. As should become clear, *all* of the applications described below are "dual-use," that is, they are readily adaptable for "counterterrorist" purposes here at home.

### **Lifting the "Fog of War"**

The Information Processing Techniques Office ([IPTO](#)) describes its "mission" as one that "will lift the fog of war," in order to "understand the world. From sensing to cognition, we bring the future of computing to the warfighter."

IPTO is divided into six "thrust areas:" Cognitive Systems, Command & Control, High Productivity Computing, Language Processing, Sensors & Processing, Emerging Technologies. Each "thrust area" is further subdivided into a score of projects, the majority of which are concerned with developing technologies to "control the battlespace" of occupied cities.

The [Cognitive Systems](#) office is currently working on a project called Learning Applied to Ground Robots ([LAGR](#)), a system "to develop a new generation of learned perception and control algorithms for autonomous ground vehicles, and to integrate these learned algorithms with a highly capable robotic ground vehicle." In other words, ground-based "killer robots" that can act on their own volition and "take out" insurgents independent of any human control. Early, human-controlled versions of these systems have been deployed in Iraq. Corporate and university grifters Applied Systems Intelligence, BAE Systems, Carnegie Mellon University, Florida A&M University, General Dynamics, and SRI International among others are jointly working on the project in alliance with DARPA and the Army Research Laboratory's [Robotics Collaborative Technology Alliance](#).

The [Command & Control](#) brief is described as "the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of a mission. Without question the missions faced by our warfighters today (such as counterinsurgency) and the operational environments (such as cities) are more complex and dangerous than ever before." To achieve "situational dominance," the following projects are

in the works:

**Deep Green**, an “innovative approach to using simulation to support ongoing military operations while they are being conducted.” According to **Wired** defense analyst Noah Shachtman, software suites designed include “Blitzkrieg” which will model “battlespace” alternatives and “Crystal Ball,” a program that “will take information coming into a headquarters to figure out which scenarios are most likely to happen, and which plans are likely to work best.” As if to drive home the importance of Deep Green to Darpacrats, major corporate grifter Science Applications International Corporation (SAIC) was awarded a \$42 million contract in June for work on the project, according to **Washington Technology**.

Heterogeneous Airborne Reconnaissance Team (**HART**) (formerly known as “HURT”–the acronym says it all!) is described by DARPA thusly: “The complexity of counter-insurgency operations especially in the urban combat environment demands multiple sensing modes for agility and for persistent, ubiquitous coverage. The HART system implements collaborative control of reconnaissance, surveillance and target acquisition (RSTA) assets, so that the information can be made available to warfighters at every echelon.” According to its website, major capitalist grifter **Northrop Grumman** is designing a suite of tools to be used with unmanned aerial vehicles (UAVs) capable of operating below 100 feet.

The Persistent Operational Surface Surveillance and Engagement (**POSSE**), program “is building a real-time, all-source exploitation system to provide Indications and Warnings of insurgent activity derived from airborne and ground-based sensors. Envisioning a day when our sensors can be integrated into a cohesive ‘ISR Force’, it’s building an integrated suite of signal processing, pattern analysis, and collection management software that will increase reliability, reduce manpower, and speed up responses.” According to the **Defense Update website**, SAIC “was awarded” a \$32 million contract to work on the project for the U.S. Air Force.

The **Sensors & Processing** “thrust area” of IPTO states that since “U.S. forces and sensors” are “networked across” services and domains, new means are required to “manage” these increasingly complex systems. Since “future battlefields will continue to be populated with targets that use mobility and concealment as key survival tactics, and high-value targets will range from quiet submarines, to mobile missile/artillery, to specific individual insurgents,” therefore, “sensor processing, sensor fusing and information management” will provide the “warfighter” with the ability for “pervasive and persistent surveillance of the battlespace and detection, identification, tracking, engagement and battle damage assessment for high-value targets in all weather conditions and in all possible combat environments.”

One program, **UrbanScape** claims it will “provide the warfighters patrolling an urban environment with an up-to-date, high resolution model of the urban terrain that can be viewed, manipulated and analyzed. The overall objective of the program is to make the foreign city as ‘familiar as the soldier’s backyard.’” Or perhaps, provide the “warfighter” with a “high resolution model” of *his own backyard!* The project is a “collaborative venture” of the University of North Carolina at Chapel Hill and the University of Kentucky, one of whose researchers now sits on the board of SET Corporation’s Management “**team**.” Small world (of leveraging DARPA “expertise” into big bucks!)

We turn next to DARPA’s Strategic Technology Office (**STO**). STO’s “mission” is “to focus on technologies that have a global or theater-wide impact and that involve multiple Services.”

Among the more than *five dozen* projects in the works we find the following:

Integrated Sensor Is Structure (**ISIS**), whose goal is to develop and deploy a “stratospheric airship based autonomous unmanned sensor with years of persistence in surveillance and tracking of air and ground targets.” Essentially a large blimp that can hover at some 70,000 feet for years over a “target” city, ISIS engineers are currently developing ultra-lightweight antennas for the system. According to **[Defense Industry Daily](#)**, major corporate defense grifters who have received tens of millions of dollars in funding for ISIS include Lockheed Martin, Raytheon and Northrop Grumman.

**VisiBuilding** will address “a pressing need in urban warfare: seeing inside buildings.” This Orwellian project proposes to 1) determine building layouts; 2) find anomalous quantities of materials and 3) locate people within the building. VisiBuilding “will develop knowledge-deriving architectures for sensing people and objects in buildings” in order to “find which buildings should be searched, through detailed assessment of targeted structures for building layouts and behavioral analysis, live updates of building occupancy to support building raids, and finally post-mission analysis to find hidden objects or people.”

A perfect tool for “snatch squad” specialists deployed to “render” suspect “targets” during counterinsurgency or police operations! According to **[Washington Technology](#)**, SAIC pulled down a \$5.2 million contract for initial work on the project.

## **Conclusion**

As can be seen in the brief survey above, DARPA projects seek to enhance U.S. capabilities for dominating “target” cities. But let’s not kid ourselves, cities are viewed by corporate grifters who reap the rewards in “outsourced” multibillion dollar contracts and the securocrats who deploy these systems, as no more than killing fields and occupation zones. What does this say about a predatory system that regard human beings as so much expendable waste to be targeted, tracked and when expedient, killed by machines controlled by other human beings thousands of miles away?

America’s techno-warriors and their corporatist masters most certainly plan to field such systems in the “homeland” itself. Viewed as exemplary means to control “restless natives” in the imperialist metropolis, surveillance technologies replete with biometric “smart cards,” highly politicized terrorist “watch lists,” sensor and tracking equipment are the “speartip” of a technical-scientific counterrevolution, neoliberal globalization’s “dark side.”

Deployed in U.S. and European cities along with the other accoutrements of an emerging police state—data mining, internet and cell phone surveillance—in the final analysis, these systems represent not the strength, but rather the precarious nature of capitalism’s entire geopolitical project. However, that doesn’t make them any less deadly—or dangerous—to a functioning democracy.

*Tom Burghardt is a researcher and activist based in the San Francisco Bay Area. In addition to publishing in [Covert Action Quarterly](#), [Love & Rage](#) and [Antifa Forum](#), he is the editor of [Police State America: U.S. Military “Civil Disturbance” Planning](#), distributed by **[AK Press](#)**.*

The original source of this article is **[Antifascist Calling...](#)**

## [Comment on Global Research Articles on our Facebook page](#)

### [Become a Member of Global Research](#)

Articles by: [Tom Burghardt](#)  
<http://antifascist-calling.blogspot.com/>

**Disclaimer:** The contents of this article are of sole responsibility of the author(s). The Centre for Research on Globalization will not be responsible for any inaccurate or incorrect statement in this article. The Centre of Research on Globalization grants permission to cross-post Global Research articles on community internet sites as long the source and copyright are acknowledged together with a hyperlink to the original Global Research article. For publication of Global Research articles in print or other forms including commercial internet sites, contact: [publications@globalresearch.ca](mailto:publications@globalresearch.ca)  
[www.globalresearch.ca](http://www.globalresearch.ca) contains copyrighted material the use of which has not always been specifically authorized by the copyright owner. We are making such material available to our readers under the provisions of "fair use" in an effort to advance a better understanding of political, economic and social issues. The material on this site is distributed without profit to those who have expressed a prior interest in receiving it for research and educational purposes. If you wish to use copyrighted material for purposes other than "fair use" you must request permission from the copyright owner.  
For media inquiries: [publications@globalresearch.ca](mailto:publications@globalresearch.ca)