



Pentagon Sees Small Firms as Big Guns

James Flanigan

During the Iraq war, U.S. aircraft using infrared cameras from Northrop Grumman Corp. — which could see at night and peer through smoke and haze — guided Marines up the Euphrates Valley with far fewer casualties than might have otherwise been the case.

But it is through these lenses that something beyond the battlefield can be glimpsed as well: an important new Pentagon policy for handling corporate contracts.

The technological core of those cameras was made by Indigo Systems Inc., a 7-year-old Santa Barbara-based company with 200 employees and \$37 million in revenue. Northrop tapped Indigo for its processors and detectors because of Defense Secretary Donald H. Rumsfeld's "force transformation" program, which pushes the Pentagon and its primary contractors to obtain the most up-to-date technology from the commercial sector.

Indigo had built infrared cameras for miners who need to see in dark shafts and firefighters who toil in smoke and flame. Because Indigo already had developed the basics of the camera, Northrop could then assemble a sophisticated \$100,000 military-ready piece of hardware — able to withstand nuclear radiation and other hazards — on the base of a \$5,000 device.

"Rumsfeld came into office asking why he couldn't deal directly with high-tech companies in Silicon Valley as he did when he was in private industry," explains James Montgomery, a one-time defense company executive who heads a Santa Monica investment bank specializing in military issues.

As a result, a whole phalanx of technology companies — many of them relatively small — are benefiting from the \$80 billion that the Pentagon will spend this year on electronics and information technology. That's a 10% rise over last year's amount.

For example, Foundstone Inc., a 4-year-old Mission Viejo firm, is growing rapidly thanks to its software that scans information systems for weaknesses that could be exploited by hackers — or terrorists. It recently received a contract to make the Air Force's own computer systems more bulletproof.

Wavestream Corp., a West Covina company founded two years ago by Cal Tech graduates, makes an amplifier that allows companies to communicate directly and confidentially without the vulnerabilities inherent in satellite transmissions. The same technology also is a boon for ships at sea — including those of the Navy fleet.

Meanwhile, Chatsworth-based DataDirect Networks Inc. has specialized in massive information storage systems for 15 years. Lately, it has been receiving more orders from military planners who need such capabilities for battlefield simulations.

The list goes on. Matrics Inc. of Columbia, Md., is working on the next generation of barcode scanners, which will enable port directors to scan containers quickly and keep trade moving. The same technology, it turns out, also will allow military inspectors to more easily check the contents of crates and packages.

Nevenengineering Inc. of Santa Monica has come up with software that performs facial identity scanning. This has many applications for commercial customers. But it also has natural uses for the military. The Defense Advanced Research Projects Agency, or DARPA, supported company founder Hartmut Neven's work when he was, until recently, a computer science professor at USC.

What all these companies have in common is that they have thrived despite the long downturn in technology investment by businesses. The reason: "Defense spending has sustained high-tech development," says Allan Thygesen, a managing partner of investment firm Carlyle Group.

To be sure, the Pentagon has always backed

new technology — from DARPA's support for development of the integrated circuit to the Defense Department's pioneering of the Internet. In the end, those products transformed the entire economy.

What is different about Rumsfeld's initiative is that it calls for direct help for small companies in the belief that their commercial technologies will strengthen the military.

For the long haul, executives at all of the companies listed above have their eyes set on the commercial marketplace more than they do the defense business.

For example, both Indigo Systems and Nevenengineering see the real payoff for their infrared and machine-vision technologies coming from the automotive industry — specifically, in collision avoidance systems for cars and trucks.

"Automotive volumes will really bring the cost of infrared devices down," says Tim Fitzgibbons, president of Indigo Systems, who worked for Rockwell International when that firm was predominantly a military contractor.

That kind of thinking is just fine with Rumsfeld, who in the 1980s and early '90s headed the pharmaceutical firm G.D. Searle and TV set-top box maker General Instrument Corp. (now a division of Motorola Inc.)

That doesn't mean, of course, that small-business people should rush to knock on the Pentagon's door. All except for the very largest companies still must deal through major contractors or other firms that specialize in government work.

"The Pentagon is a challenging customer for small firms," says Loren Thompson, who keeps tabs on military contracts as the director of the Lexington Institute in Arlington, Va. "But it is more open to new ideas under Rumsfeld than at any other time in recent memory."

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