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Experts Say Technology Is Widely Disseminated Inside and Outside Military

By JOHN MARKOFF

SAN FRANCISCO, May 20 Congressional efforts to rein in a Pentagon surveillance project may be ineffective because new surveillance technology is being widely disseminated both inside and outside of the military and other less visible federal offices are pursuing similar research, industry executives and computer scientists say.

The Defense Advanced Research Projects Agency's Information Awareness Office, overseen by Adm. John M. Poindexter, faced widespread opposition last year to its Total Information Awareness project after reports about the project raised concerns about civil liberties. On Tuesday, the agency delivered a 102-page report to Congress to reassure legislators.

But a related program being pursued by the government's intelligence agencies has drawn no public scrutiny.

The research being conducted for the National Security Agency, Central Intelligence Agency and the Defense Intelligence Agency is being financed by a little known federal office called the Advanced Research and Development Activity, established during the Clinton administration to provide federal intelligence agencies with basic research capability similar to that of Darpa.

The agency has a budget of about $100 million a year, according to a former government official. Its research covers a wide range of areas from nanotechnology to quantum computing.

The agency is pursuing research in areas like facial recognition as well as basic image recognition technologies, according to computer scientists. In March 2000, for example, the organization reviewed 45 research proposals and made grants to nine organizations including corporations, universities and research centers that are studying various image recognition problems.

ARDA is also financing a program called "Novel Intelligence from Massive Data," which was begun after the Sept. 11 terrorist attacks. The intent of the project is to give intelligence analysts early warning of "strategic surprises" in the same way that the Total Information Awareness system was intended to provide advance information about possible domestic terrorist attacks.

Both the Pentagon's Total Information Awareness project and the ARDA research project seek to detect hidden patterns of activity in vast collections of digital data. The development of these technologies has drawn opposition from civil liberties groups and some technical organizations.

Moreover, several computer scientists question whether such giant data "hoovering" operations, involving either vast databases or software to scan connected databases through a network, can be successful.

They emphasize that once enemies of the United States are aware that digital sentries are hunting for unusual patterns of information, they will simply alter their behavior.

"You won't find terrorists buying C4 explosives with a Mastercard," one computer scientist said.

A spokeswoman for the security agency said in a faxed statement that the Novel Intelligence research had begun in 2001 and that the only data that would be used was open source and that data about analysts would be collected with their consent within strict guidelines. Computer scientists have raised questions about the project's research agenda, because the technologies can easily be disseminated broadly.

"If they were to stick to strictly military-related research and development, there is less of an issue, but these technologies have much broader social implications," said Barbara Simons, a computer scientist who is past president of the Association of Computing Machinery, an organization that has expressed concerns about the Pentagon's project.

Information about the project on the organization's Web site (http://ic-arda.org) states that the agency is developing technologies to avoid events like the Sept. 11 attacks and other actions taken by enemies of the United States.

Since the Watergate era, the nation's intelligence agencies have been generally restricted from conducting domestic surveillance. But concerns about terrorism have led the Bush administration to try to break down barriers between various government agencies.

Military analysts said that one of the problems facing Congress was that attempts to limit weapons technologies have frequently left basic research exempt from restrictions in areas like antiballistic missile defense and nuclear weapons design.

"The downside is that basic research creates new pressures," said Christopher Paine, a senior analyst at the Natural Resources Defense Council, an environmental organization that has an arms control segment. "When the political climate changes, these opportunities loom large."

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