METROWEST DAILY NEWS

$7.3M in military spending to Natick, Waltham

By **Jon Brodkin**/ Daily News Staff
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Congress is directing $7.3 million in military spending to Natick and Waltham, where researchers will design high-strength fibers for body armor and make thought-controlled prosthetic legs for soldiers.

Foster-Miller Inc. in Waltham will receive $3.3 million for three projects, including one that aims to develop thought-controlled prosthetic legs in as little as five years.

"What's unique about the ongoing conflicts is you're getting a whole class of amputees who are young, physically fit people," said Doug Thomson, a spokesman for Foster-Miller. "They want to return to a much more active lifestyle and often remain active in their military positions."

The project is similar to one in Chicago that recently allowed a man named Jesse Sullivan to become the first amputee with an artificial arm controlled by thought.

The ultimate goal is to have neural controls implanted in soldiers, allowing them to control artificial limbs with their brains. With enough funding, it could happen in as little as five years, Thomson said.

In the meantime, Foster-Miller aims to improve existing prosthetics controlled by sensors that are placed on the skin and interpret "desired muscle activity," he said.

The U.S. House of Representatives approved the funding Tuesday as part of the Department of Defense Appropriations Bill, according to the office of U.S. Rep. Edward Markey, D-7th, who helped secure funding for Massachusetts firms. The Senate had already approved the bill, and it is expected to be signed by President Bush, a Markey spokesman said.

The U.S. Army Soldier Systems Center in Natick will get $2 million to start up a Center of Excellence for High Performance Fibers, which will design extremely thin fibers that can be used in body armor, windshields, protective layers in tents, and other applications, said Len Dube of the Natick Labs.

Dube, who arranges public-private partnerships between the Labs and industry, said some of the money will be used for contracts with academic centers and businesses. About $500,000 will be spent on fiber-production equipment.

The $2 million is for just one year, but Dube said he expects the fiber center to become a long-term part of the Natick Labs.

"This is basically the beginning of something we think has a lot of potential for the military and really for (the scientific industry in) this area," Dube said.

Foster-Miller, in addition to the prosthetic leg project, will use its $3.3 million to design large nets that can stop boats attempting to enter the country without permission, such as boats containing illegal immigrants, Thomson said.

The nets would be dropped out of helicopters and open up to their full width of 100 feet, entangling boat propellors.

"If a fast boat comes flying along and the Coast Guard tells it to stop and it doesn't stop, there's little you can do about it," Thomson said. "You can't shoot at it."

Foster-Miller will also provide the military with four weaponized robots, a continuation of a project that is in the testing phase, he said.

In other projects funded by the defense bill, the company Asaba in Natick will get $1 million to give small manufacturing businesses the technical capacity to provide the Air Force with equipment at a moment's notice, Markey's office said.

Retica in Waltham will get $1 million to continue work on creating a hand-held system to verify identities.

CellExchange, which moved from Framingham to Cambridge this year, will receive $3 million to develop organizational tools allowing the Air Force to quickly begin combat and disaster relief operations.

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