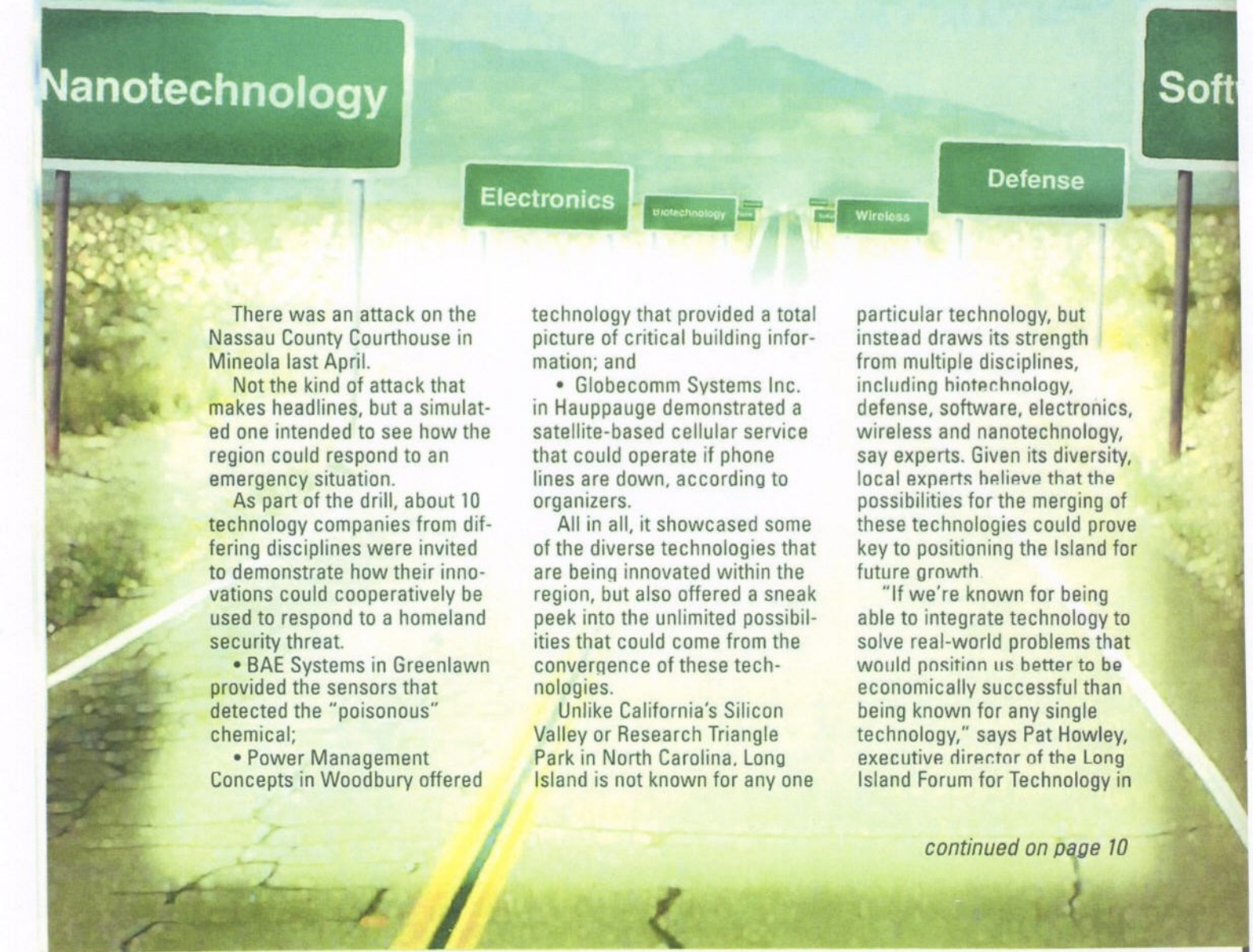
Hot on the convergence trail

Still in early stages, the pairing of tech disciplines could form the basis of LI's economy of the future

By Jamie Herzlich



There was an attack on the Nassau County Courthouse in Mineola last April.

Not the kind of attack that makes headlines, but a simulated one intended to see how the region could respond to an emergency situation.

As part of the drill, about 10 technology companies from differing disciplines were invited to demonstrate how their innovations could cooperatively be used to respond to a homeland security threat.

• BAE Systems in Greenlawn provided the sensors that detected the "poisonous" chemical;

• Power Management Concepts in Woodbury offered technology that provided a total picture of critical building information; and

• Globecomm Systems Inc. in Hauppauge demonstrated a satellite-based cellular service that could operate if phone lines are down, according to organizers.

All in all, it showcased some of the diverse technologies that are being innovated within the region, but also offered a sneak peek into the unlimited possibilities that could come from the convergence of these technologies.

Unlike California's Silicon Valley or Research Triangle Park in North Carolina, Long Island is not known for any one particular technology, but instead draws its strength from multiple disciplines, including biotechnology, defense, software, electronics, wireless and nanotechnology, say experts. Given its diversity, local experts believe that the possibilities for the merging of these technologies could prove key to positioning the Island for future growth.

"If we're known for being able to integrate technology to solve real-world problems that would position us better to be economically successful than being known for any single technology," says Pat Howley, executive director of the Long Island Forum for Technology in

continued on page 10

Next stop: A rep for integration

continued from 8

Bay Shore. Plus, it will make Long Island less vulnerable to a downturn if the region is not reliant on any one sector, as it once was when defense was at its strongest in the early 1980s, she added. LIFT organized the technology demonstration for the simulated attack. It was planned by the Nassau County Office of Emergency Management.

Bob Giglione

Philip Quarles of Life Tree eClinical is working to ease the electronic flow of information in clinical trials.

Planting seeds

"We have believed for several years that the future growth of technology on Long Island should be around convergence," says Matthew Crosson, president of the Long Island Association, a founding member of the Millennium Centers for Convergent Technologies, a group aimed at bringing together electronics, health care, information technology and biotechnology under one research program.

Three years ago, the LIA and its partners, which include various educational and research institutions, as well as private-sector businesses, received about $1 million in state funds and $150,000 in federal funds to get the project started, he said. The group was looking for another $5 million in federal funding to set up physical structures at various institutions. The money never materialized, so the consortium is now doling out the $1 million to fund five individual seed projects in homeland security and biomedicine/health care.

Partners include Stony Brook University, Northrop Grumman, Computer Associates and Farmingdale State University of New York.

One project involves developing a dependable clinical trial electronic data management system to reduce drug development costs. Stony Brook University and Great River-based LifeTree eClinical, which specializes in electronic data capture for clinical trials, are the project partners.

Since 80-85 percent of all clinical research is still performed using paper-based methods for data collection, the adoption of an electronic data gathering system would reduce the cost of new drug development by cutting a drug company's out-of-pocket pre-clinical costs, according to the project coordinators. In essence, LifeTree's Web-based technology could be used to assist in transferring patient data electronically from a hospital's operating room via LifeTree to a drug company or research lab, according to Chief Information Officer Philip Quarles, who is partners with wife Stephanie, senior vice president of information technology. This could help in such areas as identifying patients suitable for clinical trials, he said.

The convergence here comes as a result of "this technology company developing software that will actually be used to improve the delivery of health care," according to Yacov Shamash, dean of the College of Engineering and Applied Sciences and vice president of economic development at Stony Brook. A similar example is Netsmart Technologies in Great River, whose software is used to improve on the delivery of health care services, he added. "Is that a health care company or a software company?" questioned Shamash, noting that the convergence blurs the lines.

'You need wins to get a name'

Stony Brook has been a pioneer on the convergence front, particularly with the work done through its Center of Excellence in Wireless and Information Technology. The center is now housed throughout various facilities on the campus, but will get its own dedicated facility on nearby land that the university has seized from Gyrodyne Co. of America. Shamash says construction should begin this spring on the 100,000-square-foot facility, with completion in two years. He says the center will deal with projects that include the convergence of hardware and software to essentially develop new applications that could serve the health care industry.

Shamash feels Long Island has an advantage in having multiple disciplines to draw upon. Still, there is much work to be done since convergence is still in its infancy on Long Island, say

experts.

"It will take a lot of effort," says Bob Sturm, managing partner of PricewaterhouseCoopers' technology practice on Long Island. "You need wins to get a name." He says the region would be smart "to reach beyond its borders and find partners and alliances to help put this all together."

Northrop Grumman says it plans to take a proactive role in helping the effort. The company served as lead systems integrator for the simulated attack on the Nassau County Courthouse, working with the various companies on the exercise.

"We'll certainly look to this group for more opportunities in the future where we could work together," says Bob Gearhart, director of homeland security for Northrop Grumman in Bethpage.

Peter Curtis (front) and Eduardo Browne of Power Management Concepts participated last year in a simulated homeland-security exercize.

Eduardo Browne, executive vice president of Power Management Concepts LLC in Woodbury, sure hopes so. PMC, which participated in the simulated homeland security exercise with Northrop Grumman, developed a Web-based system that allows users to access real-time, around-the-clock critical building information from any site. It also provides access to a company's operational procedures and protocols in case of an emergency such as a fire or generator failure. The company has been talking to some of the participants from the April exercise including Northrop Grumman about integrating its software into some of their solutions, according to Browne.

A culture of convergence

The possibilities are endless, says Peter Goldsmith, president of the Long Island Software and Technology Network in Great River, considering the number of diverse companies that call Long Island home. But he says the region now needs to develop its strengths and help promote a culture of convergence.

"You can't just sit back and say we have these strengths," says Goldsmith. "You have to grow them and encourage them."

But this may be easier said than done, noted Greg Blyskal, executive director of the Broad Hollow Bioscience Park in Farmingdale.

"There's a lot to be said about bringing these different technologies together to cross fertilize ideas," says Blyskal. "But it's not always as simple as putting two companies together in a room," particularly when companies are dealing with limited resources and shareholders they have to account to.

"I believe it's going to happen from within companies as they push the convergence of their own technologies into new areas," noted Blyskal.

Looking forward on the convergence front, he says, nanotechnology and biotechnology have a lot of potential.

"They have areas of cross application and I think you'll see more of that," he added.

Laura H. Lewis, deputy director of outreach and operations at the Center for Functional Nanomaterials at Brookhaven National Laboratory, also sees a lot of promise in nanoscience – the control of matter at the atomic scale. In fact, BNL is in the process of building a dedicated facility for its nanoscience operations slated for a 2007 opening. Since 2003, more than 120 scientists primarily from the Northeast have come to use BNL's facilities for nanoscience research.

"Nanoscience can unify all of these different scientific disciplines at the nanoscale," Lewis explained. "The divisions between chemistry, physics and biology disappear because they are all concerned with the same phenomena at that dimension."

It helps that Long Island has such top research institutions like BNL from a marketability standpoint, but more needs to be done if Long Island is to become a national player in the convergence arena, say observers.

"We're known for creativity, we're known for our talented workforce," says Howley of LIFT. "The challenge ahead is to promote our reputation for integration. Are we known for that? No, but that should be a driving definition for Long Island."