

UCI Institute Helps the Helpless Fight Cybercriminals

New Clinic Walks Victims Through Cleanup Process

By CHRIS CASACCHIA

Bryan Cunningham's vision, crafted over the past year to create one of the country's top cybersecurity policy and prevention centers, is taking shape at the **University of California-Irvine**.

The Cybersecurity Policy & Research Institute's recently launched Cyber Victims Defense Clinic provides pro bono legal and technical assistance to underserved segments of the population, including the elderly, the poor and small businesses with limited resources.

The issue is personal for Cunningham, whose 82-year-old mother was a victim of a cybercrime a year before she died of complications from chronic obstructive pulmonary disease, which causes massive memory loss, among other effects. She responded to several robocalls offering to monitor, protect and fix her computer problems for up to \$50 per month. By the time Cunningham learned of the scams, she was losing several hundred dollars a month.

"This was one of the reasons I took the job," said the national intelligence expert, who served as deputy legal adviser to **Condoleezza Rice** when she was national security advisor, and a six-year stint as a senior CIA officer and federal prosecutor in the Clinton administration.

Cunningham established partnerships for the clinic with the Orange County office of law firm **Gibson Dunn & Crutcher LLP** and Irvine-based software security maker **Cylance Inc.**



Cunningham: institute's executive director says it's 'helping to get justice done'

Gibson Dunn cybersecurity partner **Joshua Jessen** will lead legal efforts, including helping victims with criminal and civil claims; litigation; and packaging cases for police departments.

"Gibson Dunn sees the clinic as an opportunity to help underserved populations who may be subject to cyberattacks, raise general awareness of cybersecurity, and help train the next generation of cybersecurity lawyers," he told the Business Journal.

Cylance will teach students about the technical parts of an investigation, evidence handling, mitigating damage, cleaning infected

devices, and preventative measures.

"We're helping to get justice done," said Cunningham, a founding partner of the Washington, D.C.-based law firm **Cunningham Levy Muse**, which has a Los Angeles office and has helped Fortune 500 companies and other global outfits comply with complex legal regulations under federal law, myriad state laws, and privacy and security requirements in the European Union and other overseas jurisdictions.

Related Missions

The clinic is one of several efforts under

way at the institute to address one of the most pressing global challenges as consumer, business and infrastructure breaches become more common and destructive.

Others include the Cyber Attack Attribution Research Project, which aims to educate government and the private sector on attacks' origins while establishing standards of proof under international law, and in U.S. criminal prosecutions, civil litigation and other contexts.

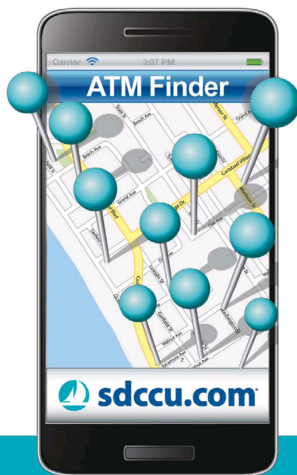
The Supply-Chain Security Research Project, among other goals, will explore the use of blockchain, a virtual ledger and currency technology that promises security, transparency, immutability and authenticity.

Its law enforcement training initiative, in conjunction with UCI's Division of Continuing Education, has developed a one week, 40-hour course for detectives on investigating cybercrimes while protecting privacy and civil liberties. About 80 members of the Orange County Sheriff's Office, OC district attorney's office, and the L.A. police and sheriff's departments have finished the program run at an L.A. sheriff's training facility.

"Almost every crime is a cybercrime" today, said Cunningham, who wants to expand the program to other police agencies, as well as to prosecutors, defense attorneys and judges.

Cunningham, who has consulted for police departments for years, wrote the privacy training manual for the New York Police Department's domain awareness system for lower Manhattan's camera video network, which helped implicate New York and New Jersey bombing suspect **Ahmad Khan Rahami** in the September 2016 attacks that injured 29

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OC's Top Software Firms Added Jobs, Grew Ranks

Six List Newcomers in Hot Spaces: AI, Gaming

■ By CHRIS CASACCHIA

A mix of new and established companies helped Orange County post solid job growth in the software sector for the second consecutive year.

The 42 largest software makers here grew employment 7% in the 12 months through July, adding 611 positions for a combined total of 9,250 jobs in one of OC's most important economic engines.

Last year the 39 largest software companies with local operations grew employment by 5%.

The most recent gains marked the sixth straight year the sector, which includes locally based software makers, as well as subsidiaries and operations of big, primarily U.S. companies, posted job gains since the Business Journal began ranking companies by local employment rather than revenue.

Seventeen companies added staff, two made cuts, and four were flat from a year earlier. The Business Journal estimated figures for 16 companies that didn't provide enough information for yearly comparisons.

The Rankings

■ Perennial No. 1, **Blizzard Entertainment Inc.**, has an estimated 2,000 workers at its irongated headquarters at Irvine Spectrum. The

company turned heads this month when it announced that several prominent professional sports executives, including Los Angeles Rams owner **Stan Kroenke**, New England Patriots owner **Robert Kraft**, and Sacramento Kings minority owner **Andy Miller** were among the first buyers of its developing esports league.

The "Overwatch" League now has franchises in Boston, London, Los Angeles, Miami-Orlando, New York, San Francisco, Seoul and Shanghai.

"Overwatch" is a first-person, multiplayer futuristic shooter game that has garnered about 30 million players and grown into a \$1 billion business for Santa Monica parent **Activision Blizzard Inc.** since its May 2016 launch.

■ No. 4, Lake Forest-based **Schneider Electric Software LLC**, moved up three spots with 550 employees. The subsidiary of French conglomerate **Schneider Electric**, which does software development out of its Lake Forest operation, reclassified some of its workers, which accounted for the jump, according to a spokesperson.

■ Irvine-based **Kofax** moved down five spaces to No. 12 after cutting 63 jobs, down 21%. The document capture and retrieval software maker was acquired in July by Chicago-based private equity firm **Thoma Bravo**.

It was expected to attract a sales price in the ballpark of \$1.2 billion in its third sale in as many years.



Zerkel: Vervys boosted payrolls 36%, expects growth to continue

■ No. 15, Newport Beach-based **MSC Software Corp.**, moved down one spot with an estimated 150 local workers, flat from a year ago. The simulations software maker was sold this year for \$834 million to Swedish IT service provider **Hexagon AB**.

MSC, which came into prominence in 1965 with breakthrough simulation software that helped the Apollo 11 spacecraft land on the moon four years later, operates as an independent business unit in Hexagon's Manufacturing Intelligence division.

■ **Alteryx Inc.** moved up two spots to No. 18 after adding 16 jobs to 136 positions, up 13%. The Irvine-based analytics software maker raised \$114 million in net proceeds from its March initial public offering, which snapped a nearly two-year drought in OC IPOs.

Its share price is up about 45% since the IPO to a market value eclipsing \$1.3 billion.

■ **Veritone Inc.** is among six newcomers—a rather high number—on this week's list with an estimated 125 employees, good for No. 20. The Newport Beach-based company, which is trying to break into the hot artificial intelligence segment, raised \$37.5 million in a May IPO. The company, which primarily helps customers with advertising and ad placement, is moving its headquarters from Newport Beach's Lido Marina Village to a 38,000-square-foot office at The Met, a multibuilding office complex a few blocks from South Coast Plaza, the Business Journal recently reported.

■ Newport Beach-based **NextVR Inc.** moved up six spots to No. 22 after adding 35 positions, up 50%. The virtual reality content maker is among the most closely watched companies in OC, lining up broadcast deals with professional sports leagues and rock stars as it builds VR content for consumers, which

have been slow to adopt the emerging technology.

The company raised \$80 million about a year ago from a consortium of Asian technology companies that helped boost hiring and expanded its VR catalog.

■ Foothill Ranch-based **iBASEt**, which makes task-based, quality assurance, maintenance, and operational management software for large manufacturers, held its No. 25 ranking, despite adding 16 jobs to 82 positions, up 24%.

Tom Hennessey, vice president of marketing and business development, credits the gains to a more rosy business outlook from its customer base of Fortune 100 companies.

"We have seen from our clients a boost in confidence about their businesses due to solid economic growth and a strong desire to transform the way they manufacture by applying technology to drive transformation and innovation," he told the Business Journal in an email.

■ No. 27, Irvine-based **Vervys LLC**, maintained its ranking while adding 19 jobs to 72, up nearly 36%.

Vervys President **Mike Zerkel** said he believes growth will continue into next year.

"Current clients, such as **Zenimax Online Studios**, **American Airlines** and **Blizzard Entertainment**, have been key as we continue to build on our partnerships," he said. "We have also seen great new business activity as companies continue to look for local, onshore software development firms who focus on quality."

The local jobs gains significantly outpaced global hiring among the 42 largest software makers with operations here. Companywide employment hit 835,431, up less than 1%. ■

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people.

Cunningham's daughter, who attends college in New York, heard the blast two blocks away when the bomb exploded in the Chelsea neighborhood.

Cunningham has also consulted for the LAPD and the L.A. Sheriff's Department on license plate reader policy and body cameras.

Eye on the Future

The idea for an institute with national scope was first suggested about two years ago by LAPD Chief **Charlie Beck**, who approached former UCI law school dean **Erwin Chemerinsky**. Chemerinsky recently took the same post at the **University of California-Berkeley** law school, but not before he worked with university executives to make the idea a reality.

Cunningham attended numerous advisory meetings before being persuaded to apply for the executive director position. He was hired about a year ago and brought an extensive resume to the post, which ultimately answers to UCI's Donald Bren School of Information & Computer Science, the Henry Samueli School of Engineering, the schools of Law, Physical Sciences, Social Ecology and Social Sciences, and the Division of Continuing Education, as well as the chancellor and provost, all of which fund the institute.

Cunningham said he drafted significant portions of the Homeland Security Act and related legislation and helped move it through Congress. He was a principal contributor to the first National Strategy to Secure Cyberspace, worked closely with the 9/11 Commission, and provided legal advice to President **George W. Bush**, Rice, the National Security



On campus: institute also educates government, private sector about cybercrime; trains law enforcement officers to investigate; establishes standards of proof; and conducts research

Council, and other senior government officials on intelligence, terrorism, cybersecurity and related matters.

He was founding vice chairman of the American Bar Association Cyber Security Privacy Task Force and was awarded the Na-

tional Intelligence Medal of Achievement for his work on information issues. He was the principal author of legal and ethics chapters in several cybersecurity textbooks.

His writing credits also include a pilot for "Project Mc2," a Netflix series now in its

Clinic Connection

The Cyber Victims Defense Clinic provides pro bono legal help to underserved populations, including the poor, elderly and small businesses. It also trains investigators of cybercrimes. To learn more, visit its clinic website at www.cvdv.clinic@law.uci.edu.

fourth season that aspires to spur girls' interest in science, technology, engineering and math.

The goal to reach young students is a key part of the cybersecurity institute's efforts to boost expertise in coming years, a perennial concern of companies and government agencies.

The center has partnered with the Anaheim Union High School District, Santa Ana Unified School District, Cypress College and with to develop cybersecurity curricula for high school students, in hopes the exposure will inspire them to pursue careers in the field at community and four-year colleges.

"This a profession where we can demonstrably show there's millions of jobs at the end of the road," said Cunningham, who's served on the National Academy of Sciences Committee on Biodefense Analysis, the Markle Foundation Task Force on National Security in the Information Age, and the Bipartisan Policy Center's Cyber Security Task Force.

The UCI initiatives, combined with a burgeoning cluster of cybersecurity-related business, will further Orange County's growing influence in the booming segment, according to Cunningham.

"I think we are well on our way to doing that." ■