

# NYPD tests new tool that detects credit card skimmers

May 9 2018, by Jason Dearen And Josh Replogle

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In this April 18, 2018, photo, a detective with the New York City Police Department uses a detection device that indicates if a credit card skimmer is in use at an ATM machine at a New York convenience store. The device is under development by the Florida Institute for Cybersecurity Research. (AP Photo/Mark Lennihan)

Patrick Traynor, a cybersecurity expert, was in New York in February working with police to help identify a way to detect credit card

skimmers on ATMs when he got a financial fraud alert: his own information had been stolen while he was in town.

It wasn't the first time. In five years he'd had his personal information stolen by credit card skimmers—devices illegally installed on ATMs and gas station pumps that "skim" consumer credit card numbers—a half-dozen times.

"I've got 15 years of experience in the field of information security. If I can't protect myself reliably, who else possibly can?" Traynor, a computer information science and engineering professor at University of Florida, said.

After three years of study, Traynor and two Florida graduate students invented a device they call the "Skim Reaper," a credit-card thin gadget that slides into card reader slots and can easily and quickly detect if an ATM or gas pump has been compromised. The New York Police Department is testing the Skim Reaper with some early success in its effort to rid the streets of the pervasive devices. The AP was given exclusive access to the lab where the Skim Reaper was made, as well as NYPD tests of it in the field.

The Secret Service says skimmers steal more than a billion dollars from U.S. consumers annually, money that often funds organized crime.



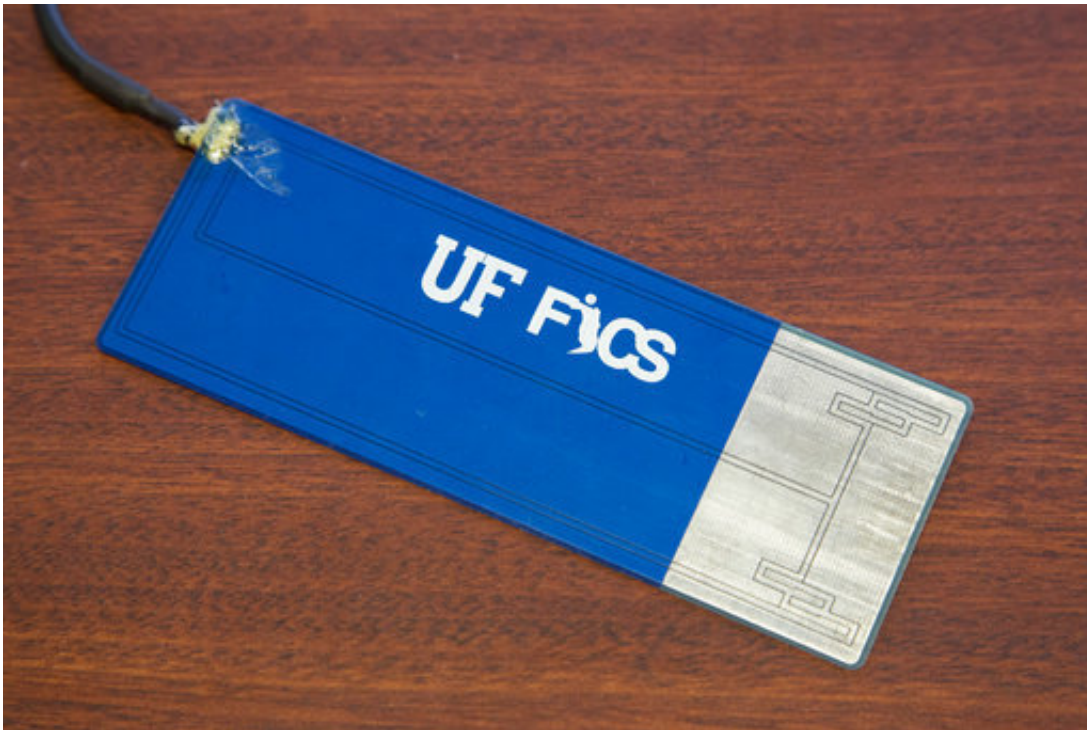
In this April 18, 2018, photo, a detective with the New York City Police Department uses a detection device that indicates if a credit card reader has been compromised, at a New York convenience store. The device is under development by the Florida Institute for Cybersecurity Research. (AP Photo/Mark Lennihan)

Most credit card skimmers work by installing an extra "read head" inside or outside a machine. This extra read head allows criminals to make a copy of the card's information as a consumer swipes it. Skim Reaper was built to detect when more than one read head is present, Traynor said.

The NYPD has four full-time, trained detectives tasked with finding credit-card skimmers installed on ATMs at bodegas, but say the problem is too widespread to be stopped with those resources.

"The problem is that it's transient, they come in and place the device and move on. In early January we were getting killed," Deputy Inspector

Christopher Flanagan of the NYPD Financial Crimes Task Force said, referring to a January spike in skimming-related crimes.



In this April 18, 2018 photo, a detection device under development by the University of Florida's Institute for Cybersecurity Research is displayed at the office of the New York Police Department's Financial Crimes Task Force. The device is slipped into a credit card reader and can detect if a skimmer device is present. (AP Photo/Mark Lennihan)

In February, Traynor gave NYPD five Skim Reapers to test. The device looks like a long credit card that can be slid into a card slot in a gas pump or ATM. It's attached by a wire to a cellphone-sized box with a small readout screen that says "possible skimmer!" when multiple read heads are detected.

Part of the attraction to the Skim Reaper is its simplicity. Flanagan said



officers in New York recently found the first skimmer using the device at an ATM in Brooklyn.

"I've been doing skimming for approximately five years now and I have never used anything like this or have known of anything like this," said NYPD Det. James Lilla of the Financial Crimes Taskforce. "It's definitely an assist we can use to combat ATM skimming."

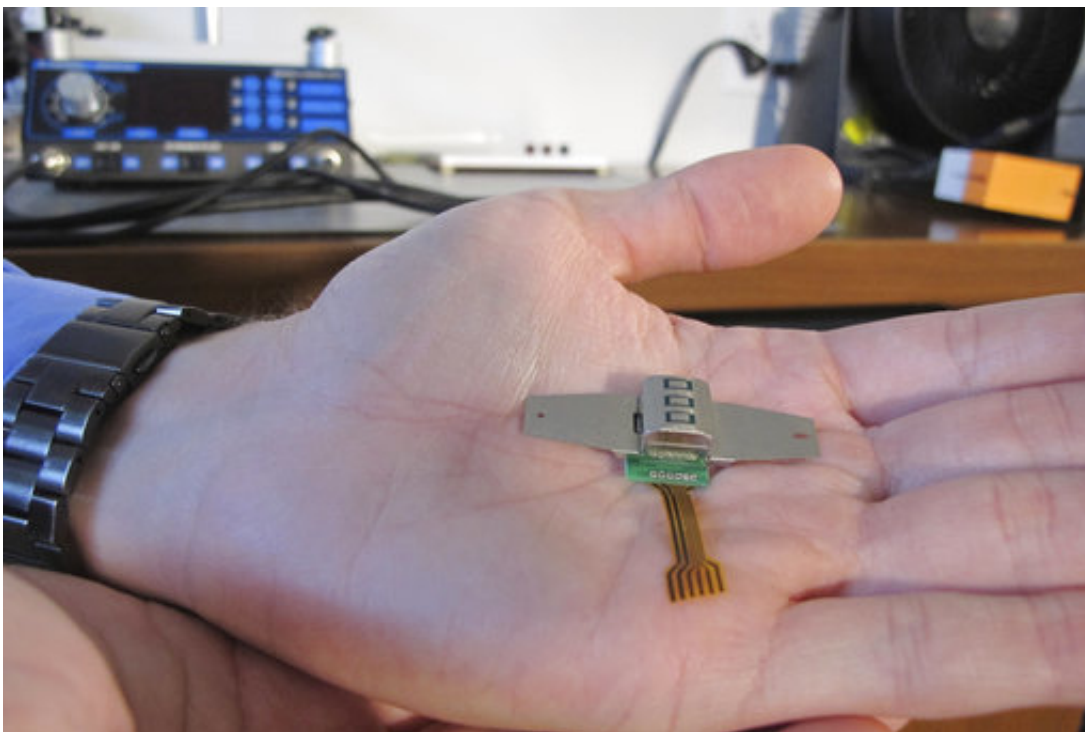


In this Feb. 13, 2018 photo taken in Gainesville, Fla., University of Florida computer science graduate students Nolen Scaife, left, and Christian Peeters demonstrate the "Skim Reaper," a device that can be used to detect illegal credit card "skimmers" on ATMs and gas pumps. The Secret Service says criminals steal more than \$1 billion from U.S. consumers each year by installing skimming devices on ATM and gas pump card readers. Now, the New York Police Department is testing the "Skim Reaper" to help investigators foil criminal attempts to steal consumers' financial information. (AP Photo/Jason Dearen)

The advent of debit and credit cards with protective chips that inserted into special readers have helped some retail businesses combat skimming. But the higher cost of the new readers and complexity of switching over to a new technology has been an obstacle for small retail businesses and gas stations where criminals have flourished.

Steven Weisman, a cybersecurity expert and professor at Bentley University in Massachusetts, said the Skim Reaper could be a "revolutionary, watershed moment" in the battle against skimmers.

"If indeed this new technology could be done on a cost effective basis, it could put the skimmers out of business. It would save people tremendous amounts of money and aggravation," Weisman said.



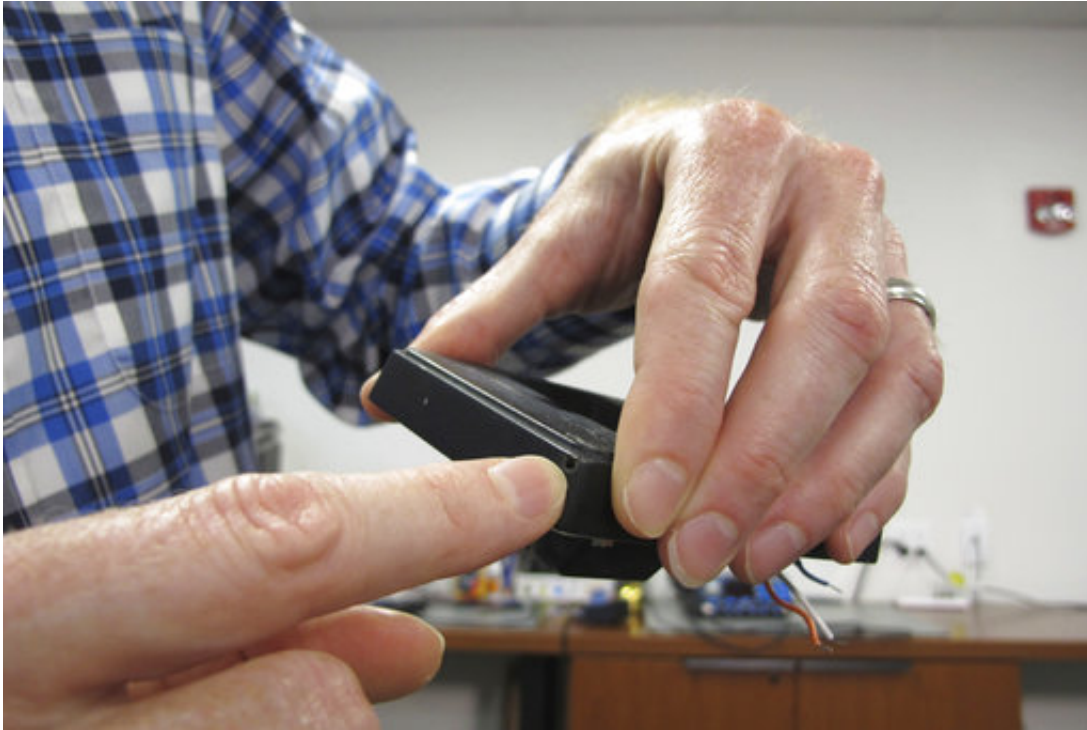
In this Feb. 13, 2018 photo, a researcher in a lab at the University of Florida in Gainesville, Fla., holds a magnetic credit card "read head" that is used to read information from cards during retail transactions. The Secret Service says

criminals steal more than \$1 billion from U.S. consumers each year by installing their own read heads on ATM and gas pump card readers. Now, the New York Police Department is testing out a device developed at Florida they call the "Skim Reaper" that can detect card skimmers and help foil criminal attempts to steal consumers' financial information. (AP Photo/Jason Dearen)

Right now, it costs about \$50 to make each Skim Reaper, Traynor said, but his team is working daily to get that number down.

In New York, NYPD's Flanagan said more testing needs to be done but he is impressed with early results. Mainly, it allows untrained officers to be employed in the anti-skimming effort, where before trained investigators were needed to identify the illegal devices.

"I have four detectives who do the ATM skimming full time," he said. "They're all extremely busy with the amount of work we do, so when I can take someone who is untrained, or has some more free time to go out and do these inspections, it certainly is a help."



In this Feb. 13, 2018 photo, Patrick Traynor, a University of Florida computer information science and engineering professor, shows a credit card reader that was rigged by criminals with a small hole where a camera was installed to steal credit card information, in Gainesville, Fla. Traynor and two graduate students invented a device called the "Skim Reaper" which can detect illegal skimming devices on ATMs and gas pumps. The Secret Service says criminals steal more than \$1 billion from U.S. consumers each year by installing skimming devices on ATM and gas pump card readers. The New York Police Department is testing the "Skim Reaper" to help investigators foil criminal attempts to steal consumers' financial information. (AP Photo/Jason Dearen)

Nolen Scaife, one of the graduate students who designed the device with Traynor, said the team is working to improve the Skim Reaper's design so that it is wallet-sized. Then, consumers would be able to carry the device and dip it into a card reader before they get gas or use the ATM to ensure they aren't being skimmed.



"There's no greater feeling than feeling the work you're doing has wide-ranging impact," Scaife said. "We're glad to be able to produce something that will curb the tide."



In this April 18, 2018, photo, Detective James Lilla, with the New York Police Department's Financial Crimes Task Force, uses a detection device that indicates if a credit card skimmer is in use at an ATM machine at a New York convenience store. (AP Photo/Mark Lennihan)

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