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# TO CATCH A THIEF

How casinos spot cheats.  
And how cheats beat the system

**TAGGED CHIPS** Assigning a unique radio-frequency identification (RFID) serial number to each betting chip eliminates counterfeiting, and stolen chips can be deactivated. The company Gaming Protection International uses RFID sensors and electronic tags loaded with information, such as the cash amount of the chip, so casino security can track how much money is on the table. Casino de Genting in Malaysia uses RFID-enabled baccarat tables to prevent cheaters from slipping more chips onto the table after a win.

**FACE TIME** Casinos use facial-recognition software to match video recordings of patrons with a database of known cheaters. But backlighting, head movement, and hats and sunglasses are enough to stymie the matching process. In June, Biometrica, which has sold facial-recognition software to up to 175 casinos, introduced a system that takes nine photos of a gambler's face from different angles in areas where the lighting is consistent—on escalators, in turnstiles, or standing in front of ATMs—and compiles the shots for a clearer picture.

**THE TROJAN HORSE** In 2009, a hacker was caught after he installed a program that took over the credit meter on a slot machine. After deliberately jamming the machine by sticking his finger in the payment slot, he called a casino tech to fix it. With the machine open, the hacker peered inside to locate the input-output slot on its computer. Once the tech left, the hacker deftly inserted a wire into the slot through a gap between the lower and upper doors of the machine. He then plugged in a chip with a program that gave him 50 credits every time he punched a button connected to the chip.

year to some form of cheating, and sophisticated hustlers can take as much as \$500,000 in just an hour. As cameras get better, smaller and cheaper, the cheaters are gaining an edge and casinos are struggling to keep up. "We're really buried in tech and don't know how to get out," Voyles says, adding that because security systems don't generate

income, casinos are slow to update.

But that night at the Cosmopolitan, the house won. One of the Cutters slipped up, and security was alerted. Nevada Gaming Board agents were called in and shut down the game and detained the players. Still, they couldn't find a camera. Bill Zender, a security contractor for high-end casinos, says that the

agents didn't find anything because they couldn't get a warrant to search the gamblers. Video footage showed no illegal moves or suspicious behavior, and under Nevada law, the agents didn't have probable cause to perform a full body search. The Cutters were released.

In May, some of the Cutters were finally caught. A casino surveillance



**SMART SHOE** In 2009, a Japanese card manufacturer introduced a device called Angel Eye that uses a scanner hidden in the shoe, the plastic card case dealers use, to track unique codes on each card. Dealers scan when they deal and rescan at the end of each hand. If a cheater swaps in a card that's different than the one he was dealt, a computer linked to the shoe detects the discrepancy.

**TABLE EYE** Overhead cameras send images back to the surveillance suite, where character-recognition software reads the cards. The casino's surveillance team can then follow each hand and spot switches and false shuffles. For blackjack, the software can instantly compare actual game outcomes with what would have happened if every player made the smartest decisions with the cards they were dealt. Cheats leave a trail of improbably lucky wins.

**THE CUT** In baccarat, the dealer presents a player with a card to cut the deck before play. Using the cut card, the cheater shields his index finger from view while he brushes the edge of the deck. A camera on his sleeve records the card order. The player leaves the table and passes the camera to an accomplice. The video is slowed down, the card order determined, and the results sent to confederates back at the table.

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manager in the Philippines spotted a "spatula-like" camera hidden up a baccarat player's sleeve and he identified four more likely gang members nearby. Meanwhile, casinos are considering installing counter-surveillance scanners that detect the low-frequency sound that video cameras emit.

Not four miles from the

Cosmopolitan, you can buy such a scanner for \$720 from Fox's Spy Outlet. Manager Andrew Rowles will tell you that it has a range of only a few feet, and it might be picking up a cellphone, not a video camera. Rowles can also sell you a camera to beat the scanner. It's hidden in a stick of gum and costs just \$150.

—ANDREW ROSENBLUM