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## Inside the Kiosk: cash handling and security

by [Matt Cunningham](#) \* • 11 May 2010

A retail/service company installs a bill-payment kiosk at the front of a popular retail location. The attractive, functional kiosk draws customers' attention, and soon many of them begin using it to pay their bills. The kiosk proves so popular, in fact, that its under-sized cash drawer has to be emptied twice a day.



On this day, the store manager receives an e-mail notifying her to a full cash drawer. She goes to the front of the store, opens the kiosk and removes a six-inch-thick wad of bills. On the way back to her office, she's asked by a customer about an item stored in a locked case. The manager, ever mindful of her customer service training, stops to help the customer.

As she fishes for her keys and answers the customer's questions, the manager absent-mindedly sets the stack of cash from the kiosk on a nearby counter. She finds her keys and turns back to the customer, leaving the cash unguarded in the middle of the store.

This is a real-life case study, one that highlights the importance of incorporating the right security components and processes into a cash-handling kiosk.

"Until you straighten this out, you're not going to have full deployment, because it scares the heck out of the owners," Said Ed McGunn, CEO of [Corporate Safe Specialists](#).

[TIO Networks](#) COO Joseph Nakhla sums up the situation for deployers:

"Managing cash is not easy," he wrote in an e-mail. "It is specialized work, and taking shortcuts around manufacturing, transactions record keeping or cash collection processes will simply bite you."

### Old meets new

The parts of a self-service deployment that handle and secure cash sit at the front line of a conflict between very old (hard currency) and cutting edge (self-service) technologies. The bill counter/handler, safe and cash tracking sensors have a lot of responsibilities, says McGunn.

"Any time that there's money involved in a business, there's a legacy process you need to port with the money," he said. A good cash-handling kiosk installation, he explained, takes the best security practices from the traditional retail checkout counter and moves them into a hands-off environment, often in some of the most insecure locations in the store.

To further complicate the situation, [MEI](#) President – Retail Tom Nugent says that cash fraud has evolved with the times. Cash acceptors, for example, have to incorporate basic fraud prevention, such as shutters that stop the old-fashioned coin-on-a-string trick, as well as countermeasures for modern, sophisticated fraud.

“Thirty years ago, for someone to go and copy a [monetary] note was pretty difficult,” he said. “Now, it’s very easy to take currency and make something that physically looks like a cash note.”

Nugent describes staying ahead of cash fraud as an “ongoing race” that never ends.

“We spend a lot of money in research and development specifically to try and stay ahead of people creating fraudulent notes and coins,” he said.

### **Old problem, new tools**

That ongoing R&D has turned modern cash-handling components into sophisticated devices that can measure everything from the UV signature of a bill’s ink to the specific density of a coin.

“There’s knowledge we have that allows us to validate all features” of a bill or coin, Nugent said. Sensors in the company’s bill acceptors, for example, can detect several features of a metallic strip placed in most American bills. The strip’s position in the bill, its metallic makeup and even the level of electromagnetic field it generates all help the bill acceptor separate legitimate money from counterfeit bills.

Nugent adds that MEI stays in close contact with federal officials, so that its components can exploit the latest security measures built into currency.

“There’s a lot more we can’t talk about,” he said.

McGunn adds that once money is accepted into a kiosk, the safe that protects it often uses its own list of technology features to do its job. CSS has developed safes, for example, that can be accessed only by entering a security code into the touchscreen on the kiosk. That step sends a message to the deployer’s accounting and security network, logging exactly who opened the kiosk, when the action occurred and exactly how much money was in the kiosk safe when it happened.

McGunn says a well-designed kiosk can operate in a “closed loop” management system: Money is counted as it enters a cash-handling cartridge in the kiosk’s safe. When the cartridge is full, a store employee logs into the kiosk and replaces it with an empty cartridge, then logs the full cartridge into the store’s main safe. Every step of the process is tracked by the aforementioned online logs, so management can precisely know which employees moved how much money to what location. If done right, this process keeps employees from touching cash and actually can speed up accounting processes.

“When the cash is removed, it’s already been counted,” McGunn said. “The kiosk is going to add operational value from the back end. The time savings [can be] significant.”

### **A matter of process**

McGunn, Nugent and Nakhla all point out that while technology plays an important role in the success of a cash-handling system, planning and proper component selection are just as important to a deployment’s success.

“If you do not have a scalable and a secure plan around your cash handling, you will be in trouble,” Nakhla wrote.

McGunn explains that many deployers focus first on the marketing/branding value of a sleek kiosk, then consider the operational value of the deployment. Often, security is a tertiary consideration. That thinking needs to change, he says.

“If you don’t bring loss prevention with you, it’s almost like forgetting the seat belt in a sports car,” he said. The oversight might not kill you, but it certainly ups the risk.

“I think the most common misconception is that one size fits all,” said Nugent. A high-security system designed to handle thousands of dollars a day with no human contact would be overkill for a kiosk positioned next to a manager’s desk and expected to take in no more than \$100 a week. Since cash handling components vary in price from a few hundred to several thousand dollars per unit, the proper selection can affect ROI as much as security.

Finally, Nakhla notes that security is a holistic issue, rather than one that can just be addressed by one or two components. A deployer must consider every step in the path money follows from the customer’s hand to the corporate account. At each step, are there risks? Who, internally or externally, has opportunities to remove money during this sequence? Sometimes something as simple as a decal on the kiosk, noting that cash is removed daily, can prevent fraud or theft. In other cases, though, wise use of technology is the best route to take when filling the gaps in a self-service deployment’s security plan.

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