

COLUMNS

## Cash transactions in a mobile retail world

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By **Paul St. George**

Retailers are on a never-ending journey to offer a compelling and engaging shopping experience, to increase shopper loyalty and to reduce costs.

Today, we see that the landscape of retailer-deployed hardware used to manage and to process retail transactions is changing rapidly. The convergence of cloud-based software and feature-rich mobile devices offers new possibilities for retailers to better serve and engage their shoppers.

### POV on POS

Retailers use tablet and handheld devices in-store to serve many purposes.

Deployed to sales associates, these devices offer mobility in performing routine and repetitive functions such as price lookup or inventory confirmation via the in-store wireless Ethernet network. Applying mobile devices in this way brings valuable, real-time information to the sales associate and their shopper.

Today, retailers are focused on adding features to their mobile devices that will allow the sales associate to complete the sales transaction wherever they are in the store.

In a previous traditional setting, this was not possible since the shopper was compelled to queue up at the cash register to tender their goods for itemized sale. And technological limitations exist when attempting to bolt-on a mobility platform to an existing point-of-sale cash register.

Typical construction of a traditional POS cash register is centered on a PC workstation.

These cash register systems are often positioned in one or more fixed locations in the retail store and are served by an array of peripheral components that might include a touch display, a shopper pole display, a handheld scanner, a receipt printer and a cash drawer.

These peripheral components are typically configured with serial or USB interfaces and connect to a port on the PC workstation dedicated to each device.

Software developers engage each device through OPOS or native DLL drivers created by the hardware manufacturer. This architecture does not expose the cash drawer and printer to disparate, in-store mobile devices.

By contrast, software functionality and mobile device technology allow a retailer to bring the transaction to the shopper at their point of purchase. In this way, a retailer can increase shopper loyalty by providing a more convenient, more personalized, and more interactive transaction experience.

### Card sharp

Consider this example: A mobile credit transaction performed on a tablet or handheld can improve the quality of the shopping experience, while reducing the time of the retail transaction.

New devices offered today provide a magnetic stripe reader that connects directly to the audio jack of a tablet or handheld. This hardware makes it easy to envision a completely paperless transaction where the sales associate itemizes the sale on the mobile device, swipes the shopper's card, and instructs the system to send a receipt to the shopper via email.

This approach can make credit or debit transactions robust, secure, low-cost, fast, and very mobile.

However, retailers process multiple types of payment methods, including the most traditional form of payment for goods and services: cash. At first glance, a transaction processed on a mobile device, and then finalized as a cash payment, do not intuitively go hand-in-hand.

That said, retail transactions finalized as a cash payment can be completed on a mobile device by simply adjusting our paradigm our frame of reference by changing the retailer-deployed hardware architecture to a peer-level IP-enabled device model from a PC-centric host/peripheral model.

IP-enabled cash drawers and printers can be engaged directly by a mobile tablet or handheld device since they are not peripherals and they do not require a PC workstation to host their configuration and use.

The in-store hardware can be designed and supported as an array of IP-enabled devices, rather than a series of PC-centric workstations each with a subset of hosted peripheral components.

This strategy exposes every device on the subnet as a peer to every other device on the subnet and allows any tablet or handheld device to engage each device directly.

Drawing lessons

While cash payment processing in a mobile environment requires planning, security of the transaction need not be a concern.

In fact, in-store physical security and loss prevention can be enhanced with IP-enabled devices.

For instance, an IP-enabled cash drawer offers a simple and effective means to ensure that the sales associate can open a cash drawer only when in close proximity.

Additionally, new system-generated actions can occur in response to exceptional events.

Imagine a smart phone or tablet that captures an image through its built-in camera as the retail transaction occurs. Envision a cash drawer that directly triggers a remote IP-enabled, surveillance camera to record activities taking place during a 'No Sale' transaction.

Consider a software agent on a remote host that accepts a prompt directly from a cash drawer and sends an SMS text message to the store manager's mobile device when an unexpected cash access event occurs.

Each of these actions and many more are possible today with the integration of IP-enabled hardware. These feature-rich systems can be developed and deployed quickly using standard TCP socket protocols, available in every O/S, and without managing and deploying device-specific drivers.

AS RETAILERS continually look for new ways to engage and retain shoppers, deploying smaller hardware platforms onto in-store wireless Ethernet networks can bring the retail transaction to the shopper.

Mobile commerce can be a reality by deploying IP-enabled cash drawers, printers, and cameras.

*Paul St. George is engineering manager at [APG Cash Drawer LLC](#), Minneapolis. Reach him at [pstgeorge@apgcd.com](mailto:pstgeorge@apgcd.com).*