How Printer Software Technology is Evolving to accommodate mPOS

star PRNTSDK　　**star webPRNT**　　**star PassPRNT**
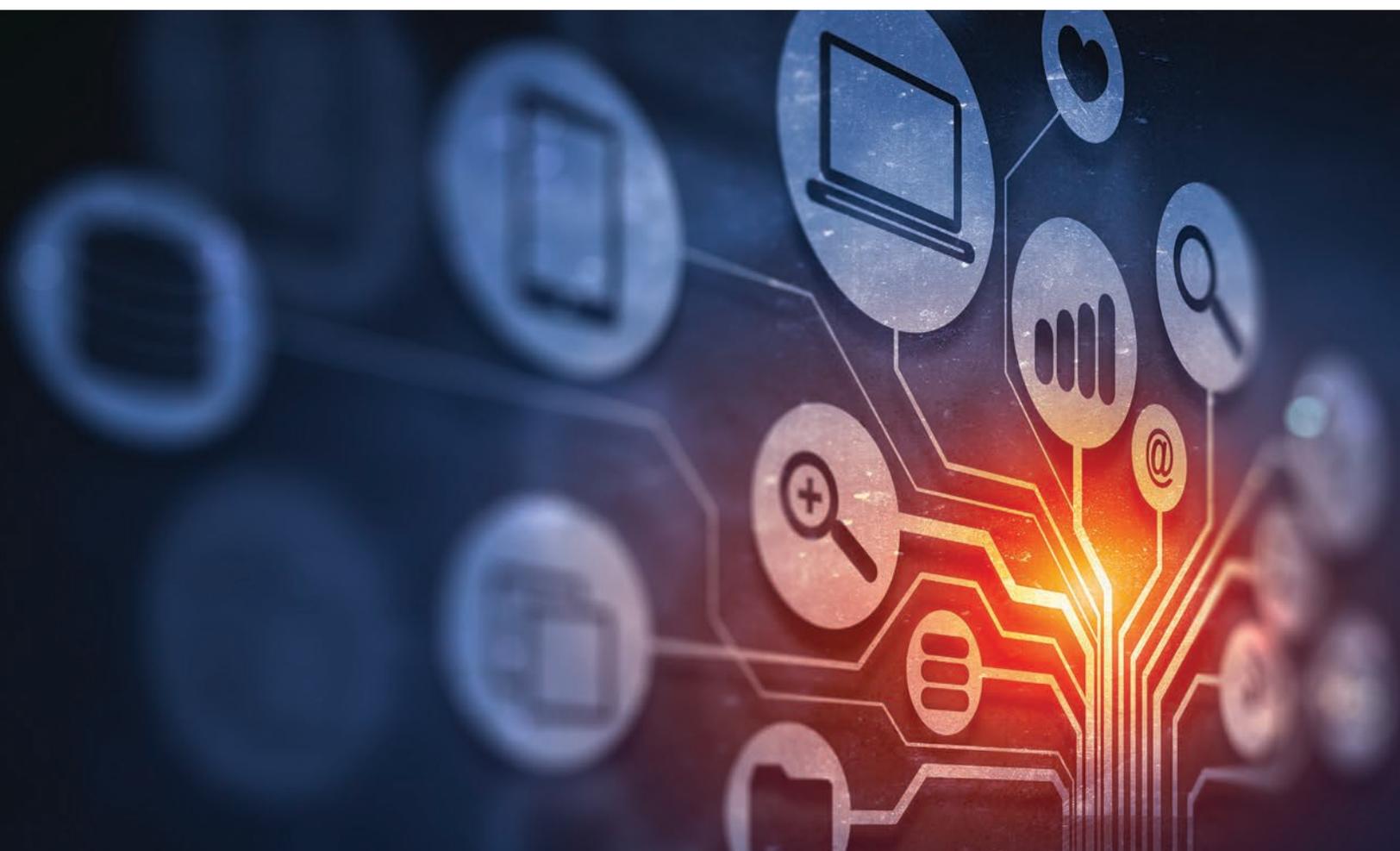
Point of sale (POS) is no longer limited to the traditional, fixed model. Merchants have tried and proven the benefits of mobility. They can complete payment transactions in-aisle or tableside, and set up additional checkouts for line busting. In addition, they can enhance the customer experience at their establishments by providing sales associates and wait staff with information on products and menu items, promotions and sales, and even the customer's purchase history or loyalty program activity.

While POS has gone mobile, so have label and receipt printers, as well as the point of sale systems they operate with. Mobile printers or mobile point of sale systems can help reduce labor time and costs of in-aisle and shelf labeling. Mobile point of sale also provides mobile receipt printing both in-store and beyond, at pop-up shops, and other outdoor sales and dining venues.

Today's mPOS solutions can be both lightweight and easy-to-use, and are capable of printing receipts and labels with a variety of media. Mobile POS peripherals can connect with mobile devices such as tablets or mobile phones using cabled, Bluetooth, or wireless network connection. They can also receive print jobs directly from the merchant's network.

From a printer software perspective, however, mPOS has created new challenges. With merchants using a variety of devices for POS functions, printing is no longer as simple as plugging in a printer that's designed to work with the POS terminal to print receipts and other materials such as labels, tags, forms, or coupons.

As your mobility initiative grows, you may encounter challenges to printing what you need, when and where you need it. Here are four common challenges merchants face with mobile printing and the solutions that will help you overcome them.

Challenge 1: Printing from an iOS, Android, or Windows Native App

With most legacy applications, many POS printers and printer brands could be used by just installing the right Windows driver. Since iOS and Android operating systems do not have a print engine to support drivers, the printer functions need to be integrated inside the POS software, thus limiting the choice. Fortunately, these companies have usually integrated the best of breed printers which make for an easy choice.

Solution: SDK Integration

A software development kit (SDK) helps software engineers or developers to speed up the process to support special features (like printing) in software applications. The printing SDKs needed to create applications are usually available for developers to download from the printer hardware manufacturer. For example, iOS applications traditionally use Objective-C or the Swift programming language, while Android uses Java.

An advantage to SDK integration is that the application your software engineer or developer creates can give you more complete control of printing, such as adjusting print formatting, controlling the cash drawer, or checking the status of the printer. It also enables additional, innovative features to be added to the print application such as digital receipts and other cloud services.

Another huge advantage is that an SDK provides a foundation for developers to build on. Without it, each developer would have to build the basics themselves, which can be especially complicated when working with multiple printers.

The modern SDKs provided by printer manufacturers are designed to be powerful while also being simple to integrate – adding printing capabilities may only require a few lines of code.

Learn more about Star Micronic's StarPRNT SDK:
www.starmicronics.com/printer/technology/starprnt_sdk

Challenge 2: Printing from a Web Browser Application

Advanced Web standards, such as HTML5, give developers the ability to build Web-based applications with nearly the same level of features as native (local) applications. Web applications have the added advantage of allowing live, automatic updating so that customers always have the most up-to-date version of the software since the application lives in the cloud.

If the POS software is Web-based, the issue isn't which mobile device the application is running on. Most Web-based solutions are device agnostic: if the device can connect to the Internet, it can usually use the application. In this case, it's necessary for the printer to receive data directly from the Web-based application

Solution: WebPRNT

Star's JavaScript-based WebPRNT technology allows complete control of any Star WebPRNT Ethernet interface printer. Developers can use Star'sJavaScript library and Builder API to integrate a Web-based application with a WebPRNT printer. In addition, this functionality can be extended to Bluetooth printers by using the WebPRNT Browser with little to no changes.

Learn more about Star Micronic's WebPRNT:

www.starmicronics.com/printer/technology/webprnt

Challenge 3: Printing from a FileMaker™ Project

FileMaker Go is a free app that runs FileMaker applications, such as those for POS and retail management solutions on iPad®, iPhone®, and iPod Touch®. Traditionally, it has not been possible to print from applications such as FileMaker Go to point of sale and mobile printers.

Solution: PassPRNT

Star's PassPRNT application solves the problem of printing from FileMaker applications. Any FileMaker Go project, native iOS or Android application, or Web application can send the receipt in an HTML format to the PassPRNT application using a URL Scheme. The PassPRNT native application then formats the receipt for the printer and sends it to any Star Bluetooth printer paired with the iOS device. The operating system can automatically switch from the FileMaker application to the PassPRNT application and back, making seamless, "one-tap" printing possible.

Learn more about Star Micronic's PassPRNT:

www.starmicronics.com/printer/technology/passprnt

Challenge 4: Continuing to use a Legacy Windows Application with Newer Mobile Hardware

In some instances, a merchant may want to update its hardware to be more mPOS compatible, but also wants to continue to use their legacy system running an OS such as Windows or Linux. Examples may include a PC upgraded to a Microsoft Surface, or a desktop serial or parallel printer upgraded to a network or Bluetooth POS printer.

Solution: Update Hardware and Drivers

Most legacy applications can be used on the latest Windows 8.1 or 10 tablets. But like any new installation, the new hardware needs to be set up, meaning new drivers, and new configuration. Network printers (either LAN or WLAN) are usually recommended for mPOS system, however new Bluetooth printers are often as powerful and easier to set up. In this configuration, the old cash drawer can be connected to the new printer. However, if the decision is made to use a mobile printer, more

modifications are needed. Since 90% of all cash drawers are usually driven by a POS printer, if a portable printer is now used, you will need to update your cash drawer to a wireless one, or integrate DK-Aircash to bring the old cash drawer to an Ethernet or wireless configuration.

Make sure to purchase a printer that supports futurePRNT and AllReceipts. Star's receipt design software, futurePRNT will help tremendously when adding your company logo or coupons to the receipt. AllReceipts is a free Digital receipts application that is supported by a large amount of printers today. These two small features will update your legacy application to a brand new mPOS solution!

Learn more about Star Micronic's AllReceipts:

www.starmicronics.com/star-micronics-cloud/allreceipts_digital_receipt_app

The Answers to the Mobile Printing Question

Efficient, effective mobile printing requires planning, and the right solutions to deliver the functionality you need. When you encounter a challenge, first evaluate the functionality and objectives your mobile printing solution must address, and then seek solutions that will provide them, whether you need wireless receipt printing to accompany mPOS devices for line-busting and tableside, or back-office label and order printing – or both.

Your POS solutions provider is a great resource to help you establish printing functionality as a part of your overall mobility initiative. They can explain how printing will change throughout your organization with the use of mobile devices, and they can point out potential challenges to mobile printing – and recommend the technology and tools to overcome them – even before you deploy mPOS. With their help, mPOS and mobile printing can contribute to greater efficiency, productivity, and customer satisfaction.

About Star Micronics

Star Micronics America, Inc. is a subsidiary of Star Micronics Company Ltd., one of the largest printer and POS manufacturers world-wide. Star Micronics also manufactures high precision machine tools and precision parts. Star Micronics Company Ltd. is ranked as one of the Top 50 "Most Stable" Japanese companies on the Japanese Nikkei. For more information, visit www.starmicronics.com or call 800-782-7636.