

Software Integration for Teller-Assist Cash Recyclers

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Popular opinion says the best solution for the implementation of a teller cash recycler is a direct interface from the teller software application to the device. Yet the development of direct interfaces can be very costly and time consuming. Furthermore, since many software houses do not have a lot of experience in writing cash recycler interfaces, the custom interface that they develop can be limited and often does not take advantage of all the available features and functionality of the hardware.

Direct Interface versus Middleware

The decision to work with a middleware solution in lieu of a direct interface can actually be a winning strategy for many cash recycler users. Middleware is typically a software program that serves as a bridge between the recycler hardware device and the teller software application. The major benefit of middleware is that it allows the cash recycler to be deployed immediately with full functionality and without a large development effort.

Middleware is normally a highly specialized software application that takes advantage of all of the special features of recycler hardware and allows for a virtual direct interface experience for tellers. Many programs remove the need for dual entry of data

and allow tellers to operate at the maximum level of efficiency.

The main drawback of middleware solutions is that balancing is performed as an end-of-day transaction that requires a separate transaction to account for the movement of cash in and out of the unit during the preceding shift.

Middleware, however, is often the right choice for an initial implementation of a recycler while waiting on a software house to develop an interface or as a long term, cost effective way to gain the full advantage of cash recycler functionality.

Direct Interfaces from Third Parties

Many software houses have realized that the complexity of writing and supporting a proprietary driver for a cash recycler can be avoided by using a recycler software application from a third party as the basis for a direct interface. Often supplied by the hardware manufacturer, these can be referred to as an API, a DLL, device-driver or communication layer.

This type of software typically handles the complicated issues related to hardware communications, such as error recovery, auto-substitution of denominations, bundling of commands, etc. The main benefit of using a third-party supplied driver is that it is designed to be quickly and more easily integrated into a teller application and to require fewer resources to support in the future. When new technology

becomes available it can be supported with a lot less effort by the teller software developers.

Similar to middleware, these drivers are typically well developed and address all of the features and benefits of the hardware. Additionally, the responsibility for ongoing updates and enhancements for this software driver is removed from the teller software house, making this a more efficient process from the initial stages throughout the lifecycle of the application.

Interface Choices and Options

Solutions exist today that provide direct software drivers that support more than one vendor's hardware. These types of applications allow a software house to develop a direct interface with all types of cash recyclers, as well as existing cash dispensers, through a single piece of software and a single development effort.

These multi-vendor applications allow financial institutions to be able to choose from the widest range of hardware options. Teller software developers can use these solutions to support all current hardware as well as add emerging vendors to their list of supported devices without having to write a new interface each time a new product is introduced. The burden of upgrades, enhancements and ongoing support become the primary responsibility of the third party software provider instead of the teller software provider.

Once financial institutions understand that a true multi-vendor landscape can be achieved, their focus will appropriately shift to the features and functions of the products themselves. Customers will then be empowered to make decisions based on critical factors such as reliability, cost of ownership,

functionality, ease of operation and service levels.

Proprietary versus Multi-Vendor Solutions

In a perfect world, every teller package would support every cash recycler available. However due to the limited number of recyclers deployed in the US up to now, the allocation of development resources to create and support drivers for multiple vendors has not been a practical business decision. Some software houses have chosen to adopt a single vendor, proprietary interface that only supports one manufacturer's equipment.

However over the past few years, manufacturers with large deployments of cash recyclers in Europe and Asia, as well as domestic manufacturers, have introduced cash recycling products for the US market. Each of these devices requires a distinct interface with a unique communication protocol. Under the previously limited view of direct interfaces, software houses would have been faced with the decision to either implement different drivers for each recycler or to ignore some brands and limit their customers' choices for hardware.

Call for a Common Interface

In the larger, more mature ATM market, the concept of proprietary interfaces has been replaced by an open, multi-vendor approach. Software developers realized that a common protocol for all ATM's provided the best solution for financial institutions that needed to support installations of hardware from multiple manufacturers.

The shift that occurred in the ATM market will occur more quickly in the teller cash recycler market. This is due largely to the rapid growth in the number of units deployed, as well as

the speed at which new technology is being introduced.

Software houses will be seeking solutions that can be implemented with the least amount of development time, and that can be supported in the future with the least amount of resources. Competing initiatives such as CRM tools, online services, network security and the adoption of other technological advances are pressuring software houses to limit the types of projects that they can address.

Direct Interface Lock-out

Multi-vendor interfaces exist today, but they have not been as widely publicized in the United States as they have been in the more mature European market. These third party applications have the ability to support both dispensers and recyclers from all the major suppliers in the market.

However, a quiet strategy to limit installations of competing hardware has been taking place for some time by the previously dominant supplier of cash dispensers in the US market. Their legacy of direct integrations to teller cash dispensers allowed them to limit competitive hardware by promoting a single provider, proprietary software interface.

Many US banks and credit unions would be surprised to learn that the direct interface that they have recently paid for limits them to just one hardware vendor. Especially in light of the fact in Europe, most software houses use solutions that support all manufacturers of cash recyclers.

Lessons Learned

Choices become limited for financial institutions when a teller software provider goes through the costly and lengthy process of writing a proprietary

software interface to a cash recycler. While middleware presents a viable solution for many institutions, customers will suffer if the more open, multi-vendor architecture is not widely adopted. Banks did not settle for this in the ATM world, and demanded an open environment for all vendors. The same will hold true for cash recycler interfaces.

With lessons learned from this protracted struggle over ATM communication protocols, the banking software industry will mature very quickly. Multi-vendor cash recycler interfaces will become the standard and provide end users with the level of choice they demand. Cash recycling hardware has achieved a level of common acceptance and now the remaining challenge of software interfaces is ready to be met.

About ArcaTech

ArcaTech Systems is a leading supplier of transaction automation solutions for the financial, retail and self-service industries. Since the company began in 1998, ArcaTech has focused on innovation and quality and now has offices in the United States, the United Kingdom, Germany, Russia and India.

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