DEPOSIT AUTOMATION: THE INSIDE STORY

A behind-the-scenes look at the critical considerations of a successful deposit automation solution

Much has been said about the benefits of Check 21. From faster processing and more rapid discovery of fraud to reduced float and quicker access to funds, today's financial institutions can capitalize on these advantages and offer enhanced customer service as a way to attract and retain their customers and members.

The processing changes brought about by Check 21 have opened the door for countless companies to enter the market with their piece of the processing pie. While such competition is healthy and helps speed advancements, it also creates distinct silos within the overall process. Thus, financial institutions must become experts or enlist experts in the nuances of every aspect of every function in order to construct a seamless solution for their particular self-service channel. Not to mention the detailed knowledge required to connect all the elements…for example, what does item processing need from the host/ core processor, what does the transaction processor need from the ATM and what does the check clearing house need from item processing? To take full advantage of the benefits of Check 21 throughout the self-service channel,

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these transitions must be smooth and transparent or financial institutions will pay the high price of exception handling, inefficient processes and market share erosion.

The solution can be found in a holistic approach that focuses on the special requirements of the self-service channel and that leverages the knowledge and experience of a complete offering. A look at the key components of an ATM deposit automation solution and how they need to closely interact will solidify the value of a unified, cohesive solution.

The ATM

Certainly the ATM and self-service delivery channel present far different needs than Branch and Remote Image capture scenarios. First of all, there is no teller interaction at the ATM so customers and members must rely on a piece of equipment to guide them through a process. Such key features as lead-through lights that indicate where deposits should be inserted add to the consumer's confidence during the transaction.

In addition, financial institutions need to know how to supply the right information on the screen for the user. To further reinforce the transaction results, check images can appear on the consumer screen and can be printed on receipts. This requires close coordination with the transaction processor and the functionality of graphical receipt printers at the ATM.

Of course, in Branch and Remote Image capture situations, the number of checks or cash being accepted is of little consequence. At the ATM, however, it is important to consider whether single or bulk checks are accepted and whether cash is accepted. What's more, the type of technology used to accept checks in a self-service environment needs to be far more robust and reliable than those found at the teller station or in a remote capture environment. ATMs must be able to accept creased, crumpled or curled checks and they need to provide true double check detection so that each check is individually scanned even though they may be inserted in a stack of thirty.

A good deal of the cost savings realized by deposit automation solutions relies on obtaining a quality image that can be used throughout item processing, clearing and archiving. Therefore, the recognition subsystem within the ATM must be superior, offering stringent analysis and a high degree of acceptance. For example,

Check images can appear on the consumer screen and print on the transaction receipt providing greater consumer confidence.

the system must be able to de-skew the image, filter through streaks and bands, enhance contrast and otherwise optimize the image in order to evaluate the MICR line and perform Optical Character Recognition. If the ATM is unable to perform at these high levels, the customer or member will become frustrated when checks are returned.

The software that drives the ATM (transaction processor) plays an important role in offering consistencies with a financial institution's back-end processing and in creating a seamless interaction across various ATM vendors in a given network. ATM software should have the flexibility to accommodate the capabilities that exist at the other touch points, such as the transaction processor. For example, the use of consumer guidance screens and videos at the ATM must be in sync with the capabilities at the transaction processor.

The self-service channel has its own fraud issues and one of the key advantages of removing the envelope from the deposit transaction is that it automatically eliminates empty envelope fraud. It is necessary however to understand the special rules at the transaction processor in relation to funds availability so that proper risk mitigation measures are in place.

At the ATM, it is critical to coordinate end of day balancing between the transaction processor and item processing for reconciliation purposes. For example if

Obtaining a quality image at the ATM is critical to effectively realizing the cost benefits of deposit automation

the transaction processor stops counting transactions for the current business date at 3:00 pm and the item processor stops processing checks at 7:00 pm, there is a four hour difference between the transactions authorized and the items processed. It is necessary then to have exception reporting and/or other reconciliation methods in place to account for the difference between the two.

ATM Servicing becomes increasingly important as financial institutions continue to migrate more transactions to this channel. For those ATMs that are image based, the frequency of armored courier pick-ups can be reduced resulting in savings for the financial institutions. First line service training programs give branch staff the ability to perform basic maintenance and proactive care keeping the ATM network operating at peak levels for maximum consumer satisfaction.

Transaction Processor

When all of the items the consumer wants to deposit are put into an envelope they are automatically aggregated into one transaction. This carries certain fees, but it is only the fees for one item. When you remove those items from the envelope and allow the consumer to deposit their cash and checks in bulk then the issue of aggregation becomes a key focal point. If the items are not aggregated in some way, there will be elevated transaction fees because each item will be handled as a transaction and associated fees will be assessed. If all of the items a consumer intends to deposit are aggregated into one transaction, the transaction fees are likely the same as the envelope environment.

The question is then one of where the aggregation will occur. Will the transaction processor have a way to prompt the consumer for more than one item and aggregate those items (including cash) into one transaction or will the ATM be asked to do the aggregation since the transaction processor may not have the ability to aggregate. Finally, whoever does the aggregation, ATM or transaction processor, how will the items that have been aggregated be reconciled with the items received by the item processor? All entities, ATM, transaction processor and core must know how this will be handled.

The devices used to initiate the deposit automation transaction include a combination of check acceptors and cash acceptors. It is critical to know how the transaction processor supports these devices. If it supports native mode (actually recognizes distinct separate devices and understands their functionality) then the handling of the transactions can be more accurate and efficient. If the transaction processor drives the devices in emulation mode then the ATM has to make those devices appear to be an envelope depositor.

Suppose one of the devices malfunctions. In native mode the transaction processor can identify the specific problem and still allow deposits in the other device. For example, if the check acceptor were out of service, it would still allow cash deposits. When envelope emulation mode is being used the transaction processor will believe that deposits should be disabled as soon as they see a fault indicating the "envelope depositor" is out of service. This would then eliminate any deposits from being accepted. Subsequently, if devices are supported in native mode, calls for service can be managed more efficiently because more information about the malfunction can be made available to the servicer. Such information needs to be communicated to the processor at the very early stages of implementation.

In addition to the mode that the software is running, it is also important for the transaction processor to understand the various on-screen prompts and guidance information that appear on the ATM, including LED/lighting needs. These details must be coordinated through the transaction processor so proper instructions are generated.

The primary function of the transaction processor is to provide transaction authorization. In order to determine whether or not the transaction is acceptable, the transaction processor must access the consumer's account information which is often held by the core processor. They must then provide the account number or sufficient information for the item processor to be able to process adjustments during the item processing phase. Likewise, both the transaction processor and item processor need to coordinate the definition of "end of day".

Other details regarding the transaction processor include shared deposits where issues can range from fraud to settlement and enhanced messaging capabilities. This can relate to the account information being made available and other communication between the ATM and the transaction processor for passing relevant information.

Core/Host Processor

The core processor is the source of account information and is responsible for transaction integrity. Therefore, such features as upgradeability, integration to existing systems, performance, control and security within the core processor are critical to successful, clean transactions now and in the future as technology and needs change.

Because the core maintains the central information file (CIF) and customer relationship management capabilities, it is important to understand the extent of these offerings as financial institutions plan and grow their marketing campaigns. For example, relational service charging, marketing-focused processes, data mining, multi-lingual

capabilities and multi-currency processing is all determined at the core. Such information and functionality must be able to be passed through the transaction processor for display at the ATM.

Transaction posting options are also part of the core processor's function. Therefore, such features as real-time memo post or hybrid transactional processing options, application feeds, master file updates, history file updates and image file compatibility will need to be addressed here.

Item Processing

As mentioned, the efficiencies of item processing are reliant on the quality of the image captured at the self service device. Any item not read by the CAR/LAR technologies at the self-service device is presented to operators with a variety of tools available for further image evaluation.

Industry standard x9.37 files are created by item processing to ensure easy transfer among other systems. It is important that such industry standards are utilized by all entities in the process. For instance, the ATM should pass industry standard formats, the item processor should accept them and if another item processor is to receive the files; they should also accept the industry standard format. Such file type standardization also simplifies merging and acquisition of financial institutions.

The item processor must deliver extremely large files of multiple gigabytes and they must ensure that the data is secure. Therefore, each financial institution must negotiate with the item processor the security protocols and technologies in place.

Image Cash Letters (ICL), the preferred vehicle for transporting electronic check payment transactions, are created by the item processor. They will inspect the files for image quality and queue those for suspect image review and re-scan if required. The files are then packaged into an X9.37 file for transmission to the Fed or Correspondent Bank. Once again, quality is critical in order to realize cost benefits of deposit automation.

Other considerations of the Item Processor include image archiving and management tools. Image archiving gives you the ability to quickly research and solve your customer's questions regarding archived data. Management tools will allow key personnel to monitor activity from anywhere on the network and identify areas requiring attention. This type of visibility helps keep your processes efficient and customer satisfaction high.

Finally, a financial institution should consider whether it

suits them best to outsource their item processing function, manage it in-house or create a hybrid of the two.

FED/Exchange/Direct Send

As ICL's are exchanged between the Item Processor and the Fed or other exchange entities, financial institutions must be fully aware of image quality standards and practices as well as image format standards.

In addition, consideration also needs to be given to the application that will build the ICL files to ensure proper formatting and compatibility to the specific format required by the endpoint or exchange network. The system that imports data from received ICLs also needs to be prepared for the variation in formats that are possible to receive, and also have tolerances established for processing ICL files that are not perfectly formed.

It is important to realize that ICLs are getting larger, representing millions of dollars, containing more check items and reaching multiple gigabytes in file size. One "bad" item can stop a transmission or reception. Stopping at this point in the process can impact operational costs.

Like many processes, ICL standards, formats, and supporting technology continue to evolve. This requires continuous knowledge of format specifications, image quality standards, image format standards and the various companion documents used by clearing organizations (SVPCO, etc.) and major banks.

A Cohesive Approach

Bringing all the pieces together into a seamless, efficient operation that will reduce operating costs and enhance customer and member satisfaction is a daunting task. With Diebold, you will encounter the experience, expertise and intimate knowledge of the self-service delivery channel capable of bringing all of these intricate, critical functions together to form a highly efficient end-to-end deposit automation solution.

The company's holistic approach focuses on the unique requirements of the self-service channel. For example, Diebold's deposit automation solutions utilize a consistent design across the Opteva platform for both intelligent check and automated note deposits. Our intelligent depository module and bulk document intelligent depository module use the same insertion slot and utilize our recognition subsystem and ImageWay® solutions. Consistent module placement delivers ease of use to your customers for quick adoption.

What's more, Diebold offers the self-service industry's most reliable check imaging technology. Our intelligent

Highly effective end-to-end deposit automation solutions must carefully coordinate the needs of all entities.

depository module™ and bulk document intelligent depository modules are so robust they can typically accept creased, crumpled or curled checks. Our character recognition engine is the best in the industry.

Diebold's recognition subsystem performs image management and optimization functions. Our recognition subsystem is application and vendor independent, allowing consistent image analytics across the ATM network. The ideal solution for mixed vendor fleets.

ImageWay ATM has flexible options to accommodate our customers' implementation needs. Start with the implementation point of choice and move into an enterprise model at your own pace. Diebold's solutions are flexible and scalable, accommodating in-house, outsourced, and blended service implementations.

Diebold's ImageWay item processing solution was developed by a team of financial services industry professionals. Engineered for security, accuracy and speed, this solution addresses the needs of the market

head-on. Skilled operators and innovative technology team up to ensure that all data will be clean and useful. In fact, Diebold consistently receives high marks for accuracy and quality from its correspondent institutions.

Diebold supports all national exchange and popular direct-send formats. Diebold inspects these files for image quality, queues those for suspect image review and re-scans if required. The files are then packaged into an X9.37 file for transmission to the Fed or Correspondent Bank. With billions of images captured and vast amounts of image storage under one roof, Diebold's capture facilities are technologically second to none.

Deposit automation presents numerous opportunities for financial institutions to enhance their brand image, reduce operating costs and capture market share. As a standalone solution or as a strategic component of an enterprise-wide distributed capture model that includes Branch and Remote Deposit Capture, deposit automation can give you the edge.
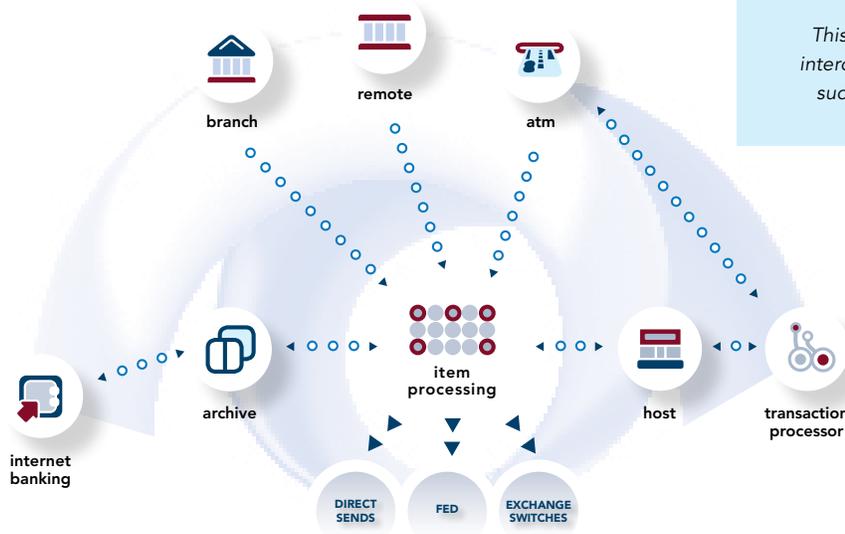
This diagram shows the connections and interdependencies of each component of a successful deposit automation solution.

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