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Intelligent Document Recognition And Remote Capture – A Winning Combination For Invoice Processing

By Bala Natraj & Bhavik Patel

Today, organizations are experiencing change that is not only impacting the structure of their accounting departments, but the way they conduct business as well. Often, organizations have grappled with managing invoice payments but no matter how sophisticated their accounting or processing systems, paper-based invoices and supportive documents create bottlenecks. The big bottlenecks have always been associated with the lack of a standard invoice structure, the need to capture and index varying elements, and with manually depositing the associated checks. Not surprisingly, in geographically dispersed organizations, these tedious and labor intensive processes are magnified and create unnecessary costs, slow processing and a heightened risk of losing invoices.

Promising technologies that sought to eradicate paper invoices and remittances through vehicles such as online bill pay and e-invoicing have only slowed the continuous onslaught of paper. In fact, the following trends are likely to continue into the foreseeable future:

- Paper invoices and checks will continue to be received at multiple remote locations.
- Cost of processing these transactions will rise.
- Organizations will continue to carry the risk associated with image quality.
- Risk of losing invoices couriered or mailed to a central site will persist.

Answering the Call

Economic conditions in the processing industry have radically changed over the past half-dozen years. Competitive pressures, technological advances, and legislative guidelines have required a very different and visionary approach toward payment processing. In fact, what was

cutting edge technology in 2001, is now well-embedded in the workplace. This leaves a red-hot demand for new solutions from companies ready to modernize organizations' work processes.

The most striking change has been in forms processing technology. Today's sophisticated recognition engines target the data entry bottlenecks by reading and capturing information even if the data appears at different places on an invoice. These powerful Intelligent Document Recognition (IDR) technologies can make use of multiple recognition engines to improve the accuracy of recognized data from invoices.

Similarly, Remote Deposit Capture has been a turnkey solution in targeting bottlenecks. The adoption of this technology has been accelerating rapidly, altering the landscape for deposit services. This solution captures checks and MICR information using a small check scanner, qualifies checks for image clearing and produces Image Cash Letters (ICL) for deposit into the bank.

In recent years many organizations have tried to automate invoice and payment processing using IDR and Remote Deposit Capture technologies separately. However, the true value of such solutions is best realized when IDR technology is integrated with Remote Deposit Capture to create a single seamless solution to capture both the invoice and check on a single software platform. This allows organizations to capture entire transactions and validate information against a variety of edits.

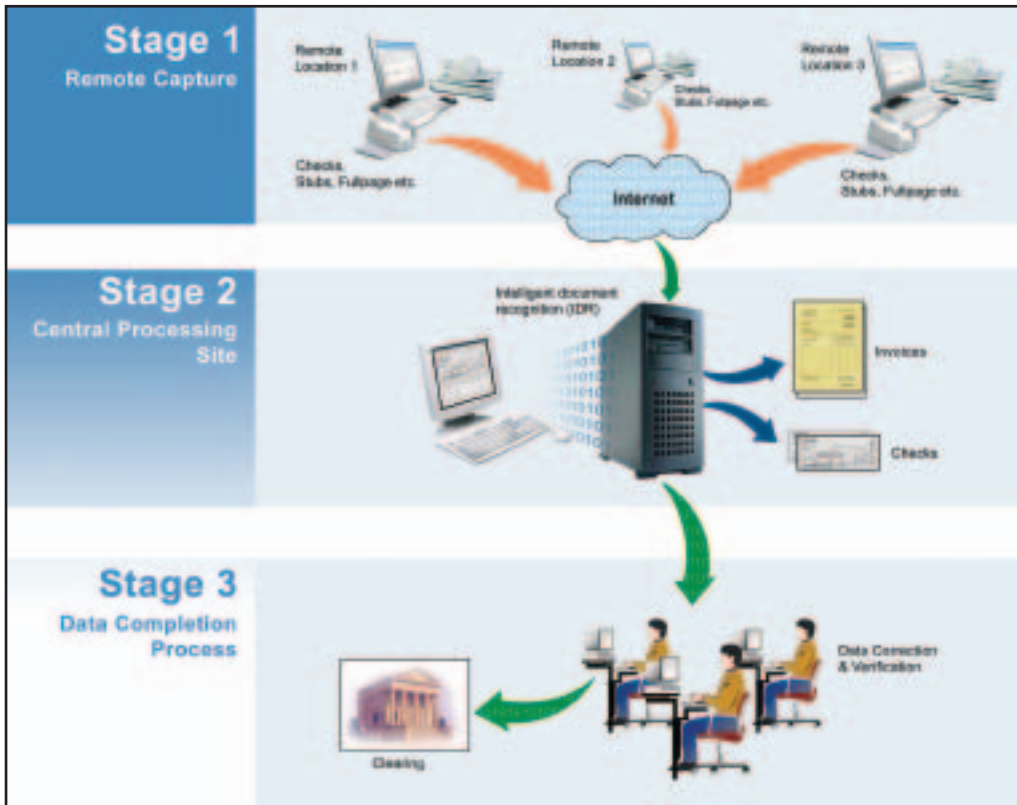
High Level View of the Process

As shown in the diagram on page 6, there are three distinct layers or steps in this combined process, they include: (1) capturing transaction images at the earliest point possible; (2) data extraction and indexing, and (3) generating clearing and account receivable files.

Stage 1 – Remote Capture

The purpose of Stage 1 is to capture a transaction at the earliest point possible to eliminate the need to courier paper documents and checks from remote locations to a central processing site for check qualification and Check 21 clearing. A Remote Deposit Capture solution allows an organization to capture images and data from both financial and non-financial documents and to centralize these images electronically for further processing. By capturing incoming work closer to the originating source, an organization is able to streamline client service functions in the remote offices, which are better able to meet the requirements of local and regional clients.

Implementation of a Remote Deposit Capture solution is a simple process because the hardware and software requirements are minimal and a client's existing network infrastructure is used. Since checks and invoices



The most difficult automated data capture problem for an organization is simply that there are thousands of different layouts and formats for semi-structured forms and documents such as invoices. Extracting data from such invoices is not easy and if the processing is done manually; it is also highly error prone. In cases where a business is handling structured forms, template-driven data analysis can produce outstanding results but in an environment with dynamic forms, these techniques don't work well. This is where identifying documents based on rules and data analysis can be used with a high degree of success.

As an example, IDR applications can be configured to find an invoice number using a keyword search that looks for the words "invoice number", "invoice no" or some other combination of words. Once this data is extracted, IDR can apply a set of rules to identify

the invoice type. Once documents have been identified and classified properly, a combination of one or more recognition engines can be used to recognize multiple data elements on each image. Further business rules can then be applied to the recognized data and forms/transactions that fail these validations, which are marked for the next stage of processing - the data completion stage.

Stage 3 – Data Completion

Stage 3 corrects and reviews the exception transactions that have been marked in Stage 2. Faster and more accurate data extraction means earlier and better decision making. And, not only is the need for correction significantly reduced, less documents lost, quicker multi-user access all add to the bottom line. All of which is possible when you have automated the manual data entry that restrains such systems.

For organizations with data-intensive documents, next-generation single solution platforms that integrate IDR with Remote Deposit Capture technology can significantly enhance processing operations. By combining these technologies, an organization can create tremendous value beyond the obvious benefits to now include radically reduced labor costs, internal processing efficiencies, enhanced client relationships and compressed business process time frames, due to the near-elimination of manual data entry.

To learn more about the J&B Software solutions that are delivering these benefits to organizations every day, visit www.JBSoftware.com.

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are imaged and sent to the central processing site in 'real time', delays that are part of traditional processing such as work preparation are minimized.

Remote Deposit Capture has profound implications for organizations' operational efficiency, account acquisition, customer retention, cost reduction, revenue generation and risk management. The benefits include the potential for (1) processing efficiencies and savings from the consolidation of servers and software components at the central site, (2) a significant reduction in the training of personnel at the remote sites, and (3) a facilitated management of the workflow. Organizations are reaping the benefits by extracting data and correcting indexing functions at the central site or distributing them to other keying or data entry facilities.

Stage 2 – Intelligent Document Recognition (IDR)

The most logical next step toward a comprehensive invoice processing strategy is to automate or eliminate the keying of paper-based transactions. This can be done by extracting required information from the invoices and checks and performing as much validation as possible before the work is presented for data entry.

Once images and data from multiple remote locations are collated at a central site, they can be made available for a series of automated background functions. The recognition process that applies to invoices is called Intelligent Document Recognition (IDR). Checks have their own set of automated recognition applications that perform courtesy and legal amount recognition, payer and payee recognition, image quality and usability assurance, which themselves include several tests that require recognition of multiple data elements.