

## **UNDERSTANDING FORMS PROCESSING**

### **Forms processing technology allows companies to process forms and standardized documents automatically.**

The information on a credit card application, for example, can be extracted by a data entry employee and entered into a host system, or the process can be automated. With forms processing technology, forms are scanned in batches. Software is used to extract typed or printed information. This information is then stored in a company's database. If necessary, a digital image of the original paper form can also be created and saved.

### **Forms processing is one of the most complex tasks in document imaging.**

That is because most forms are not designed to be processed automatically by machine, i.e., they are not "ICR-friendly". Over the years, complex and sophisticated technology has been developed to deal with the multiple functions that forms processing systems must encompass, such as image cleanup, forms removal, context analysis, data validation and "ergonomically-correct" reject-repair screens. Moreover, as the automated forms processing market gets more competitive, vendors continue to develop new features that improve performance. Some of the more interesting developments include intelligent address extraction, automatic page segmentation, two-dimensional barcodes, document image understanding, OMR analysis, conditional procedures, and OCR and ICR voting.



### **The automated forms processing marketplace is defined primarily by those applications that use the form as a data capture instrument.**

Those types of forms deal primarily with business-to-client transactions, such as processing sales orders or loan applications, and business-to-business communications, such as processing invoices and accounts receivable. Along those lines, the applications on the following page defines the long-term market for automated forms processing.

- ▶ **Auto-indexing:** ICR software is trained to look for a predefined field or character string on a business document; it is then routed to a workload distributor or workflow engine for downstream processing and storage.
- ▶ **Fax processing & routing:** The fax cover sheet is one of the most widely processed forms in the world.
- ▶ **Government forms:** Driven by the need to collect revenue quickly, many states and counties are putting in systems that automatically recognize all manner of forms having to do with revenue collection, such as property tax bills, water bills and, of course, internal revenue forms.
- ▶ **Medical claims processing:** An estimated daily cost of \$125 million is spent on medical claim forms processing. It has been estimated that forms processing technology could bring the cost down to around \$40 million per day.
- ▶ **Order entry:** Encompasses the processing of all catalog information for the direct mail industry; catalog sales, magazine subscriptions, etc., and typically employs a lot of optical mark recognition and hand print character recognition.
- ▶ **Shareholder proxy statements:** Automatic forms processing of the thousands of proxy statements that are sent out to shareholders each year expedites a data capture process that is time-sensitive, and it improves customer service.
- ▶ **Surveys & questionnaires:** This market is virtually perfect for forms automation because surveys are explicitly designed as data capture documents for batch-processing, and the user has total control over the form design so the form can be optimally designed for ICR, OCR and OMR.
- ▶ **Transportation & shipping documents:** Processing all of the tracking, auditing and disclosure forms that accompany transactions and shipments in the air transportation, railroad, trucking and shipping industries.
- ▶ **Warranty & registration cards:** High ICR accuracy rates prevail because these forms are designed perfectly for capturing hand-printed and check box data.