



ARTIFICIAL INTELLIGENCE & IMAGE ANALYSIS

AZiA's Recognition Technology for streamlined
BPO and Service Bureau operations.



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For BPOs and Service Bureaus, success can be measured on the ability to satisfy the needs of customers while generating revenue through processes where there is visible return on investment. There is an increasing demand from customers for timely data processing without threat to accuracy or privacy, which means that in order for BPOs and Service Bureaus to satisfy the needs of their customers, they must integrate a solution capable of handling complex data from various types of documents regardless of the industry for which they work. The paper chase still occurs in almost all industries today, despite the transformation to electronic documentation and cloud computing. Taking on the task of processing a business' data can be cumbersome with the large amount of complex data that resides on physical documents. But how can BPOs and Service Bureaus implement the best possible practices for handling their customers' data while generating revenue?

“The biggest source of cost associated with any process—insourced and outsourced—is related to humans tasked with its execution.” - Gartner



With today's advanced technology, BPOs are no longer tied to manual data entry or manual document routing solely because a document is complex in layout or content. Data processing can be expedited, streamlined and automated with advanced technology, helping Service Bureaus gain trust from their customers, reduce their own internal costs, and deliver accurate results, quickly – with a reduced risk for human error.

A2iA, the worldwide leading developer of handwritten and machine printed text recognition and automatic document processing, offers intelligent recognition technology capable of extracting complex information from various documents, regardless of their structure or content, and automatically routing them to user-defined locations. A2iA operates one of the world's largest research centers focusing on providing processing automation for everyday paper documents.

A2iA's software toolkits provide the ability to locate and extract whole words or phrases, including alpha, numeric, and alpha-numeric data, utilizing a user-defined or trade dictionary for advanced precision and custom abilities. Employing its proprietary Intelligent Word Recognition (IWR), A2iA helps capture intelligence from structured and semi-structured forms, columnar and unstructured documents, as well as checks and payments alike, to aid in the creation of a knowledge database, and a searchable and reportable information repository. While traditional recognition engines do not typically process unstructured documents or cursive handwriting, A2iA brings a competitive advantage to your BPO solution.

With A2iA's unique capabilities, manual keying can be reduced or even eliminated to cut labor costs, privacy increased, and a streamlined document management process achieved. Gartner reports that the BPMS market (Business Process Management Suite) is growing at a compound annual rate of 12.2 percent. In 2009, the market was valued at \$1.9 billion and it is estimated to grow to \$3.4 billion by 2014. Expand and maintain your services with A2iA - reduce internal costs, improve your business and gain a competitive edge to win new opportunities.

A2iA's product suite includes *A2iA DocumentReader™*, *A2iA FieldReader™*, *A2iA CheckReader™*, and *A2iA AddressReader™*. Each of these software toolkits are proven to streamline data management operations by reducing or eliminating manual document handling, and are optimized for BPO-type environments.

According to the United States Department of Labor, Bureau of Labor Statistics, as of May 2008, the average yearly salary for data entry keyers was \$26,120, and for word processors and typists the average yearly salary was \$31,390. By eliminating the need for data entry keyers and word processors/typists you can cut significant costs in your operations and employ intelligent recognition technology that will deliver visible results to your bottom line.

A2iA's Proprietary IWR

Industry analysts have reported that IWR successfully eliminates a high percentage of the manual entry of handwritten data that otherwise could be keyed only by humans.

IWR, Intelligent Word Recognition, lies at the core of A2iA software toolkits and recognizes entire handwritten words just like a human would, matching them to a user-defined or trade dictionary.



Applications by Industry

Government Data Processing

Accurate, secure automation.

Processing information quickly, accurately and securely is essential to BPO's and Service Bureaus, but especially those that process State, Local and Federal Government information. Data handled by government agencies and organizations often requires a level of privacy that can be hindered by manual keying or third-party human interaction. By employing A2iA's technology to automate the process of data extraction and document classification, documents can be handled automatically so that manual keying can be virtually eliminated; third-party interaction becomes obsolete and thus privacy increases.

A2iA DocumentReader™ is an award-winning, proven solution that can be seamlessly integrated into your current BPO processes to speed data extraction, improve document routing and automation, and to enhance accuracy so that you can boast better results and maintain high customer satisfaction. Capable of extracting complex data from various types of documents whether the information is machine-print, handprint or complex handwriting—even cursive, *A2iA DocumentReader* is proven to deliver results.



Complex documents; easily processed.

Government documents vary greatly from each state and each Federal agency-- from structured tax forms, audit reports and census data written in old-fashioned writing styles, to unstructured, handwritten testimonials, legal claims, and structured forms, summons and subpoena documents. With a wide range of document- and data-types, it is important for BPOs to employ a workflow capable of processing all information so that they may increase their efficiencies and satisfy their customers.

When extracting data from structured or semi-structured forms, and documents that contain fields like check- and comb-boxes, BPOs look to *A2iA FieldReader™*, a software component capable of locating and extracting information from structured and semi-forms. With proven successes, this software toolkit can be easily and seamlessly applied to these types of documents. Because *A2iA FieldReader* can extract everything from machine print on tax documents, to handprint and even cursive handwriting on motor vehicle registration forms, complex government forms can be processed without relying on manual keyers



Increased efficiency for a visible ROI.

BPOs and Service Bureaus can increase their efficiency by processing all types of documents including unstructured documents and payment documents, allowing for automatic classification and reconciliation, speeding the time it takes to aggregate the information into the IT system.

A2iA DocumentReader's classification capabilities allow documents to be classified by both content and layout with a holistic approach so you can automate your processes even further-- routing documents to proper locations for better information management and increased access to the data.

Governments often process checks and related payment documents together, such as for taxes or child support remittance purposes, for example. To allow for automatic processing and reconciliation of payments, BPOs can employ *A2iA CheckReader™*, a comprehensive check-processing toolkit, to locate and extract information from all check fields as well as confirm image quality, usability and negotiability. Checks, paystubs and remittance coupons can be automatically reconciled and BPOs can offer a comprehensive service that boasts fraud detection as well.

Healthcare Data Management



Healthcare data management has become increasingly important with new government regulations that place importance on accuracy and efficiency of the processing of critical health information. Many healthcare payors and providers rely on BPOs and Service Bureaus to process their information. Because healthcare information must comply with HIPAA regulations and other privacy and accuracy standards, automating the workflow to eliminate third party interaction is ideal for those processing this sensitive data. A2iA's proprietary recognition technology provides an ideal solution for lifting complex health data and indexing the documents, such as physicians' notes, charts, and clinical documentation, for example.

The power behind *A2iA DocumentReader* is its proprietary IWR- Intelligent Word Recognition technology. With the ability to lift whole words or keywords regardless of the way they are written – machine print, handprint, and even cursive, this toolkit provides the value-add necessary to make your BPO solution stand out and delivers a recognizable ROI. And, with the ability to locate and lift alpha, numeric, and alpha-numeric fields, it is especially useful when lifting and indexing patient information by identifying data, such as an insurance number, Social Security number, or provider ID.

Fast and accurate indexing is critical in healthcare and is necessary to meet meaningful use requirements as set forth by government regulations. Able to index documents by layout *and* content, similar to the way a human would, A2iA's advanced technology automatically indexes individual documents, or entire patient records as one, with little to no



manual intervention. This is not a template/rules based classification, it is intelligent classification based on artificial intelligence.

Expedite EOB processing.

Perhaps one of the most concentrated aspects of health data are EOBs. Complex in nature and difficult to process, EOBs must be processed quickly and accurately to streamline the revenue cycle for payers, providers and patients alike.

Today, there is no 100% automated software solution for the processing of EOBs, but *A2iA DocumentReader's* simple point-and-click functionality brings process automation to a new level with expedited processing speeds and reduced errors. With the click-of-a-mouse, operators can perform quick and interactive data extraction on full columns of information from complex and nested EOBs. With customizable templates and the ability to lift alpha, numeric, and alpha-numeric data such as identification numbers, diagnostic codes and dates, *A2iA DocumentReader* eliminates a significant portion of manual keying and allows for on-the-spot verification, facilitating a successful export to 835 format and automatic routing based on eligibility, patient name, or provider ID, for example.

A2iA DocumentReader's
simple point-and-click
functionality captures full
columns of alpha,
numeric, and alpha-
numeric data like
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diagnostic codes and
dates, reducing keying,
speeding processing and
reducing errors.

Insurance: Property & Casualty, Life & Annuities, and Health

Insurance documents require timely handling for quick responses. Property and casualty, life and annuities, and health insurance documents are high in volume and contain complex data, residing on structured forms, payment documents, or completely unstructured free-form letters.

Often pushed aside for a manual process because of their complexity, the remaining unstructured or handwritten documents are still a vital component of the workflow. On average, these complex documents represent between 25 to 40 percent of the workflow, and contain 60 to 80 percent of the key information necessary for insurers to run their businesses successfully -- requiring the same level of attention and speed of processing as printed or digital data.

Insurance claims and underwriting tasks are often dense and complex in structure, and because of compliance rules and regulations, the documents are often time-sensitive. Because A2iA specializes in extracting data from complex documents no matter the writing type, BPOs can process even non-standard, or complex documents, quickly and accurately. Match user-defined fields, such as date, amount and payee/payor names, with related documents such as a change of beneficiary form or handwritten letter offering additional services to your clients while ensuring their customers' data is kept confidential since third-party interaction is kept at a minimum. Boast fast processing speeds



and reduced check-float times by automatically reconciling documents such as policyholder payments or change of beneficiary forms.

A2iA's software toolkits help to minimize the risk of human-error and expedite the process to ensure better customer satisfaction. By eliminating manual labor, costs can be cut and document handlers can be delegated elsewhere for more enhanced processes.

BPO's can also offer enhanced services to their insurance clients by boasting expedited response times with automatic classification, or routing, in addition to data extraction. By minimizing the human aspect to the process, documents can be scanned and quickly analyzed on a holistic level – both by layout and content. This unique capability of *A2iA DocumentReader* speeds processing times and reduces internal costs, delivering information throughout the organization in a quick and efficient manner. Efficiencies are seen at the clients' site while you see a visible ROI.

Financial Data and Lockbox Processing

Streamlining lockbox payment operations.

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 Period: 01-09 As Of: 01/22/09

Check Nbr	Check Type	Vendor ID	Vendor Number	Ref Nbr	Trunc	Inv Nbr	Inv Date	Status	Pay Date	Due Date	Discount Amt	Check Amt	Flag Taken	Amount Paid
006374	CK	SALD99K	48815684											
86549	GB	96355	12/2/08	Z		12/2/08	12/2/08		0.00	54.88	0.00	54.88		54.88
59875	GB	96355	12/2/08	Z		12/2/08	12/2/08		0.00	1239.00	0.00	1239.00		1239.00
42365	GB	96357	12/2/08	Z		12/2/08	12/2/08		0.00	964.14	0.00	964.14		964.14
42365	GB	96359	12/2/08	Z		12/2/08	12/2/08		0.00	54.89	0.00	54.89		54.89
22573	GB	96359	12/2/08	Z		12/2/08	12/2/08		0.00	254.59	0.00	254.59		254.59
12264	GB	96360	12/2/08	Z		12/2/08	12/2/08		0.00	250.47	0.00	250.47		250.47
74596	GB	96361	12/2/08	Y		12/2/08	12/2/08		0.00	96.34	0.00	96.34		96.34
42354	GB	96362	12/2/08	Y		12/2/08	12/2/08		0.00	395.55	0.00	395.55		395.55
12267	GB	96363	12/2/08	Y		12/2/08	12/2/08		0.00	75.57	0.00	75.57		75.57
89851	GB	96364	12/2/08	Y		12/2/08	12/2/08		0.00	96.32	0.00	96.32		96.32
82262	GB	96365	12/2/08	A		12/2/08	12/2/08		0.00	350.14	0.00	350.14		350.14
74563	GB	96366	12/2/08	A		12/2/08	12/2/08		0.00	54.88	0.00	54.88		54.88
12545	GB	96367	12/2/08	A		12/2/08	12/2/08		0.00	1239.00	0.00	1239.00		1239.00
				A		12/2/08	12/2/08		0.00	964.14	0.00	964.14		964.14
				A		12/2/08	12/2/08		0.00	54.89	0.00	54.89		54.89
				A		12/2/08	12/2/08		0.00	254.59	0.00	254.59		254.59
				A		12/2/08	12/2/08		0.00	96.34	0.00	96.34		96.34
				A		12/2/08	12/2/08		0.00	250.47	0.00	250.47		250.47
				A		12/2/08	12/2/08		0.00	96.34	0.00	96.34		96.34
				A		12/2/08	12/2/08		0.00	395.55	0.00	395.55		395.55
				A		12/2/08	12/2/08		0.00	75.57	0.00	75.57		75.57
				A		12/2/08	12/2/08		0.00	96.32	0.00	96.32		96.32
				A		12/2/08	12/2/08		0.00	350.14	0.00	350.14		350.14
				A		12/2/08	12/2/08		0.00	395.55	0.00	395.55		395.55
				A		12/2/08	12/2/08		0.00	75.57	0.00	75.57		75.57
				A		12/2/08	12/2/08		0.00	96.32	0.00	96.32		96.32
				A		12/2/08	12/2/08		0.00	350.14	0.00	350.14		350.14

Many businesses and financial institutions rely on BPOs to handle their complex lockbox payments and by simplifying operations with *A2iA DocumentReader*, see a visible ROI and improved service offerings for their customers.

Gain a competitive edge using *A2iA DocumentReader* to streamline payment processing operations, such as lockbox or invoice processing – typically time consuming and performed manually. With the simple click of a mouse, *A2iA DocumentReader* quickly captures full columns of alpha-, numeric-, and alpha-numeric data, and can perform simple

math to sum columns or calculate discounts, for example. *A2iA DocumentReader* also allows users to gain better control of check-float times with automatic reconciliation of checks and accompanying payment documents. Reduce the data entry time and allow for correction and validation on-the-spot.

Employing A2iA's intelligent recognition technology allows BPOs to ensure accuracy and efficiency within their payment solutions, speeding processing times, improving accuracy and minimizing errors. By eliminating post-scanning costs, as well as third-party interaction, BPOs and Service Bureaus mitigate risk, streamline their operations, and provide enhanced customer service.



Comprehensive and accurate payment processing.

By eliminating post-scanning costs and third-party interaction, BPOs mitigate risk, streamline their operations, and provide enhanced customer service.

BPOs can also ensure accuracy and take on the tedious task of manually keying payment field information with A2iA's comprehensive check processing toolkit. With built in fraud detection engines and image quality / image usability (IQA / IUA) features, *A2iA CheckReader* extracts all key fields of checks and related payment documents and allows for automatic reconciliation, regardless of whether the information is machine printed or written in cursive handwriting. A proven solution for check processing applications including Accounts Payable/Accounts Receivable solutions, *A2iA CheckReader* makes automating your check processing fast and easy. By eliminating manual keying, accuracy is improved, customer service enhanced, and operational costs reduced. Ensure your customers' documents are processed quickly and securely, reducing the time it takes for them to see their funds.

Streamlined Services and Improved Practices

Extracting and classifying documents automatically with A2iA allows BPOs to practice the most efficient data management to streamline their operations and generate revenue. Eliminating manual keying and sorting from day-to-day operations can cut enormous costs and allow Service Bureaus to produce a visible ROI while generating additional opportunities and projects across all vertical markets. When processes are streamlined and automated, customers are happy and business opportunities grow. Automation, regardless of the document- or writing-type, provides for best overall practices for BPOs wanting to gain a competitive edge.

Gartner reports that the BPMS market (Business Process Management Suite) is growing at a compound annual rate of 12.2% and is estimated to be \$3.4 billion by 2014.

Expand your services with A2iA - gain a competitive edge to win new opportunities.