



ARTIFICIAL INTELLIGENCE & IMAGE ANALYSIS



A2iA's Government Applications

Complex data extraction and advanced classification
for e-discovery, de-classification, redaction, and archiving.

www.a2ia.com
+1 917.237.0390
info@a2ia.com



It is becoming increasingly important for governments, federal, state, and local, to be timely, accurate and efficient all while remaining transparent and compliant for public disclosure regulations. With current technology, it is expected that information be processed in a timely manner as well as that information be easily searchable and reportable. This expectation has propelled government to strive toward e-administration: *faster processing* of its documents and the *building of a global knowledge base* to ensure *immediate information retrieval* and *sharing*-- imperative to all aspects of government. Physical documents flood government entities as agencies increasingly consolidate and strive to eliminate wasteful time and spending, and in order to increase productivity within these agencies, automated document processes must be implemented. Desire for e-administration has emerged in the wake of advanced technologies that reinforce the need for more streamlined operations, and A2iA, the worldwide leading developer of handwritten and machine printed text recognition, information extraction and intelligent document classification is adept in automating workflow to cut costs, increase accuracy, and improve efficiency. A2iA's software toolkits are ideal solutions for all types of government agencies, whether at the federal, state or local level.



A2iA's advanced recognition technology is proven to automate workflow, increase efficiency, and save organizations money by providing easily integrated toolkits capable of extracting all types of writing from various documents, regardless of their structure. Traditionally, common OCR and ICR solutions do not recognize cursive handwriting and complex documents, but that is A2iA's differentiator – A2iA specializes in locating and extracting even the most difficult information and allows its users to create an all-inclusive workflow.

A2iA is a necessary component for government agencies looking to provide immediate access to information at a lower cost. And, with A2iA's Research and Development team able to provide professional services and customized development efforts, recognition results and efficiencies are maximized.

This document discusses A2iA's proprietary recognition technology employed by A2iA's software toolkits and the ways in which A2iA can provide operative solutions for document management within the federal, state and local, and military and defense spaces.



The A2iA Difference: Complex Data Capture and Advanced Classification

Using A2iA, government entities automate workflows for all types of forms, documents, and payments, helping to eliminate manual keying, reduce physical document storage and to mitigate risk. Automation is the first step towards an electronic administration, and A2iA can assist in the transformation by extracting information from physical documents so information can be digitally stored, allowing governments to efficiently search and report on information as well as perform accurate discovery. All of this, however, must be done with the consideration that governments operate on tight budgets.

A2iA's Proprietary IWR

A2iA's proprietary IWR, Intelligent Word Recognition, technology lies at the core of the company's software toolkits. IWR recognizes entire handwritten words similarly to that of a human, matching them to a user-defined dictionary. Instead of looking at words letter-by-letter, IWR performs a deeper analysis and allows users to recognize, classify and index all cursive and complex documents with the same level of flexibility as printed or digital data.

Industry analysts have explained that the best use for IWR is to eliminate a high percentage of the manual entry of handwritten data and run-on handprint fields that otherwise could be keyed only by humans.

A2iA's software toolkits use proprietary Intelligent Word Recognition (IWR) technology to accurately and automatically extract all types of writing from the diverse types of documents common in government, as well as to index them and allow for routing to proper departments or files.

Automating your document sorting can prove to be efficient and cost-saving when you integrate A2iA. A2iA's engines look at documents just a human would, employing a user-defined keyword dictionary, and by looking at the layout of the document-- to group and define documents as a related group or folder, rather than individually.

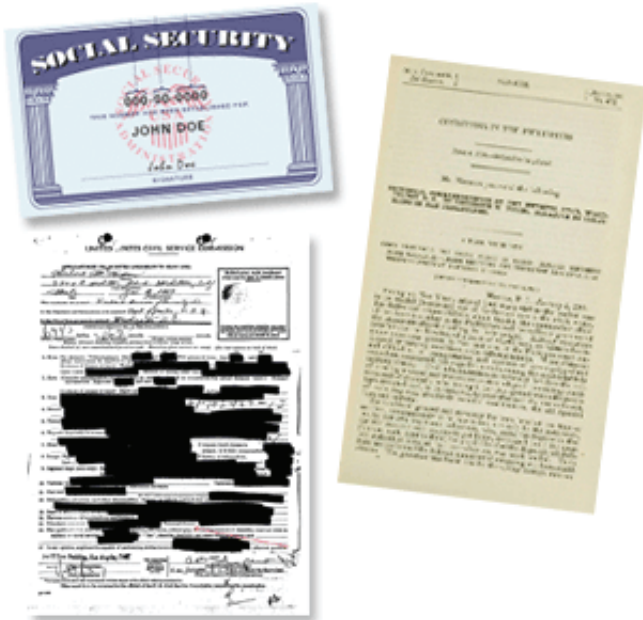
By allowing governments to eliminate manual keying and sorting, costly, manual labor can be cut from the budget and keyers can be deployed elsewhere for increased productivity. An added benefit of employing A2iA's advanced recognition engines is the enhancement of privacy-- as third-party interaction is eliminated, especially critical for confidential data in the military and defense space. Governments often handle documents with writing in various languages or with different country-specific writing styles and A2iA's software toolkits are available in 23-country versions and 6 languages, with an Arabic version in development, for use with all types of writing, including handwriting.



Structured and Semi-Structured Forms

Structured forms, common in the government space, are easily processed with *A2iA FieldReader™*, a software component that specializes in locating and recognizing information from structured or semi-structured forms such as those used for taxes, administration documents, or DMV forms. Unlike traditional recognition engines, *A2iAFieldReader* uses combined OCR, ICR, and IWR technology, all proprietary to A2iA, to process all writing formats; from machine or block printed text to freeform cursive, handwriting. *A2iAFieldReader* identifies all types of

information in the same pass, looking at user-defined fields, such as a handwritten name, printed date, address block, check box, or radio button. For tax documents, where address fields are important citizen information to be captured, for example, *A2iAFieldReader* can locate and extract this demographic information and is easily interfaced with main postal directories such as the USPS, to aid in the recognition process. *A2iAFieldReader* is a proven solution for automating government forms containing demographic information, and has successfully been deployed for timely, accurate processing.



Unstructured, Complex Documents

Not only does A2iA successfully automate and streamline processes for forms, it also has the ability to locate, capture and index critical government information that resides on complex and unstructured documents. Transporting unstructured data to an archive or reporting systems can be difficult and costly if you are dependent on manual labor such as keying and sorting.

With *A2iADocumentReader™*, locating, extracting and indexing data, including difficult cursive handwriting from completely unstructured documents, is simple and quick, and will help you streamline your entire data management operations to enhance search and look up, reporting, and archiving.



Selected for projects because it was the only software able to overcome such complexities related to unstructured documents and complex cursive handwriting, *A2iA DocumentReader* is a software component that can be seamlessly integrated into document management solutions. Proven to save years of manual labor, it locates, reads and extracts all types of information or writing, no matter the document-type.

According to the U.S. Department of State, documents deemed permanent records must be stored for 25 years before being stored in the National Archives; information in those records must be readily available for 25 years and the fastest way to process and classify that information for storage is through intelligent data capture. The push toward e-administration -- striving to integrate solutions that generate actionable data, is the first step in discovery and by allowing A2iA to automatically recognize and classify documents, electronic use becomes easy, efficient, and a cost- and space-saving solution. Records not only become digital, but searchable and reportable.

A2iA's software toolkits help governments increase productivity for record retrieval with an automated process for back filing and the creation of useful and intelligent digital archives. Public disclosure regulations in pursuit of transparency have pressed the need for governments to have readily available information. Many records must be easily attainable such as police reports, local government budgets, and various other publicly disclosed documents. Turning information into actionable data allows for efficient records management and increased citizen satisfaction.

Unstructured documents like census data and historic archives, audit reports, police reports, handwritten legal letters, claims, summons, and subpoena documents, to name a few, can be processed quickly, in a cost-effective and low-labor-intensive environment. Using IWR, *A2iA DocumentReader* has the unique ability to interface with a user-defined or trade dictionary to achieve high confidence levels, and cleans, de-slants and segments writing into words or keywords, just like a human would. And, with the ability to automate even more, once the complex data has been located and extracted, *A2iA DocumentReader* can then automatically route documents with little or no intervention to user-defined locations or departments.

Military and defense agencies also rely on accurate reporting and sharing of information to carry out their operations. For critical defense operations, it is important that information be handled quickly and accurately for search and look-up. A2iA provides agencies with the ability to locate, extract and even de-classify documents, or redact information, using keyword spotting, to ensure the privacy and security of confidential information, and allow for sharing public records without threat to security.



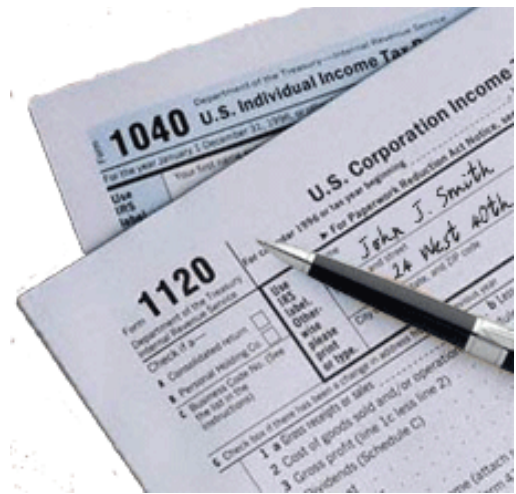


Payments

Many documents within the government space include accompanying payments, such as parking tickets and taxes. Automating payment documents, including automatic reconciliation for expedited response and reporting times, is a proven capability of *A2iACheckReader™*, a set of advanced image analysis and intelligent recognition engines that enable software applications to capture handwritten and machine printed information from all areas of checks and related payment documents. With the ability to reconcile payments with a database as well as with accompanying forms, A2iA allows government agencies to quickly process payment information for accurate reporting of payment and efficient record keeping.

A2iA CheckReader extracts Payee/Payor name, Date, Courtesy (CAR) amount, Legal (LAR) amount, MICR information, as well as verify the presence of signatures and endorsements on the back of checks. It also provides information about check image quality, usability, and negotiability.

Tax payments can be processed at point of retrieval and with A2iA's built-in fraud detection features, faulty tax payments can be identified. Fines, fees, and other types of related payment documents can be processed automatically, helping to eliminate manual keying and float time, as well as be reconciled and matched with the information extracted from related forms and documents, to provide faster, more efficient government operations.



Expedite your Document Management and Eliminate Wasteful Spending

Proven to deliver an ROI, A2iA makes your information actionable searchable and reportable.

- Eliminate manual keying of all types of government documents, automating the workflow for a more seamless, budget friendly document process.
- Incorporate handwriting into your workflow by extracting machine print through to complex, cursive handwriting from structured and unstructured documents on all types of forms, documents and archives.
- Properly route information to the appropriate departments or workflow; index documents by layout and content with A2iA's holistic methodology.
- Create easy-to-manage archives and eliminate the need for physical document storage space.