Case Study

OVERVIEW:

Tampa-based AAA Auto Club South and Dearborn, Michigan-based, The Auto Club Group combined operations in 2011. The merger required that uniform business practices be established and put in place for both organizations.   One of the compliance issues that needed to be addressed was protecting the personal identifiable information (PCI) of AAA's customers. A selection process for automated redaction software was ensued and AAA selected system integrator Paragon Systems together with their "DocuShield" redaction software to create a solution for AAA's business need.

AAA has distinct groups of documents; membership and insurance. The membership documents which are received in the mail are scanned into the document management system which is a Vertafore application, "ImageRight". The insurance documents are sent in from the AAA insurance agency offices. These offices scan the documents and then transmit them via files or multifunciton devices (MFDs) to a central location within the AAA IT center for further processing.

CHALLENGES:

- **Document Quality** - AAA needed to maintain and improve where possible the quality of the images throughout the process so that they were as legible as possible.

  - **Lack of Form Consistency** - AAA has hundreds of different document types. This meant that the location of the personal information that needed to be redacted was different on each document type.

- **Timeliness of Back-file Redaction**. The back-file redaction process numbered 2 million documents for membership and 18 million documents for insurance.

PROJECT OBJECTIVES:

- Create a solution that would be seemlessly integrated with the existing document management application.

- Attain redaction processing rates that required less than an average of 5 seconds per document.

- Support the complex environment of processing documents in both the membership and insurance lines of business simultaneously.

AAA Auto Club South

Paragon Systems Delivers and Deploys Redaction Solution Based on Paragon's PRobot Technology

Maintaining excellent customer service is a number one priority at AAA Auto Club South and protecting its member information was no exception. Tampa, Florida based AAA Auto Club South and Dearborne, Michigan based, The Auto Club Group merged in 2011 and became the second largest AAA club in North America serving over 8 million members. When AAA was faced with an internal compliance mandate to remove all personal identifiable information and personal credit information from their documents they approached Paragon Systems for a solution.

Complex Requirements

AAA needed a system capable of redacting documents for both the membership and insurance lines of business and a system that was also was also capable of integrating with their existing document management system, "ImageRight". All documents were to be retrieved from ImageRight, redacted, and then the redacted document needed to be imported back into ImageRight with the original unredacted document archived and ultimately deleted. They not only wanted to redact documents that were being received daily but also all documents previously stored in the ImageRight system (back-file). The daily volume for documents received is 12,000 insurance documents and 8,000 membership documents. The back-file consisted of 18 million insurance documents and 2 million membership documents. The processing time per item needed to be less than 5 seconds on average. AAA needed to complete the back-file conversion within eight months. AAA wanted a process that was able to identify all PCI and they wanted an exception queue for manual processing for those cases when a document failed to redact. The manual process required a user interface (UI) to be used so the user could view the document, redact it if necessary , and save to ImageRight.

The Solution

The solution required the implementation of two Paragon applications; the **PRobot** workflow automation engine and Paragon's **DocuShield** redaction software. Together these two products formed the solution installed at AAA. The PRobot application controls all I/O functions while the DocuShield product performs the processing within the individual worksteps (see worflow diagram on back of page) for the the redaction process.

The PRobot engine makes calls to the DocuShield application which in turn performs certain functions. For instance, the PRobot retrieves a document from the ImageRight system, makes a call to DocuShield, and the image cleanup and OCR processes are initiated. The PRobot application records the history of the process in an extensive log for each event in the process.

The primary worksteps in the process are as follows;
- *Image Retrieval* - from ImageRight document repository
- *Image Cleanup* - despeckle, deskew, and image enhancement
- *OCR* - to render document content to text
- *Document Identification*- document identification in order to determine whether a document needs to be redacted or not
- *Application of Redaction Rules* - to locate and redact necessary PII fields, identify exceptions for manual redaction, and import back to ImageRight.

Image Retrieval

Image retrieval required Paragon to integrate the PRobot application with the ImageRight document repository. Image retrieval is accomplished in either automated batch mode or manually one image at a time.

Image Cleanup

Image quality is difficult to control when the capture process is distributed and the source is unpredictable (fax, MFD, scanner) which was the case at AAA. Therefore, it was extremely important to have a workstep for image cleanup. The image cleanup process produced a sharper image with a smaller file size. This in turn produced greater redaction accuracy when identifying information on a document and the smaller file size meant that the document processing times were reduced.

OCR

Each character is returned with an accuracy confidence value with alternate character information. One incorrect character can drastically change a word; for this reason the recognition engine reports a certainty value for all recognized words. Advanced font information and location information allows DocuShield to create text representations of the original, with a similar layout.

Document Identification

The system administrator sets up a profile for each document type. This profile is used to identify the document and to instruct the application to either redact the document or exclude it from redaction If the document is excluded from redaction it is imported into the ImageRight system without any redaction. If the document is tagged for redaction it is sent to the next step, "Application of Redaction Rules".

Application of Redaction Rules and Redaction

A comprehensive set of redaction rules are used to locate the PII fields that require redaction. The application identifies the beginning and end of the field to be redacted and applies an overlay to obscure the document information. This overlay is user definable and can be a solid color or set of characters. The document is moved to an exception queue if the document was tagged for redaction and the redaction process failed to find any PII or PCI information. Once in the exception queue users are able to retrieve the document in the manual redaction viewer and then manually redact the document. The redacted document is then imported into the ImageRight system.
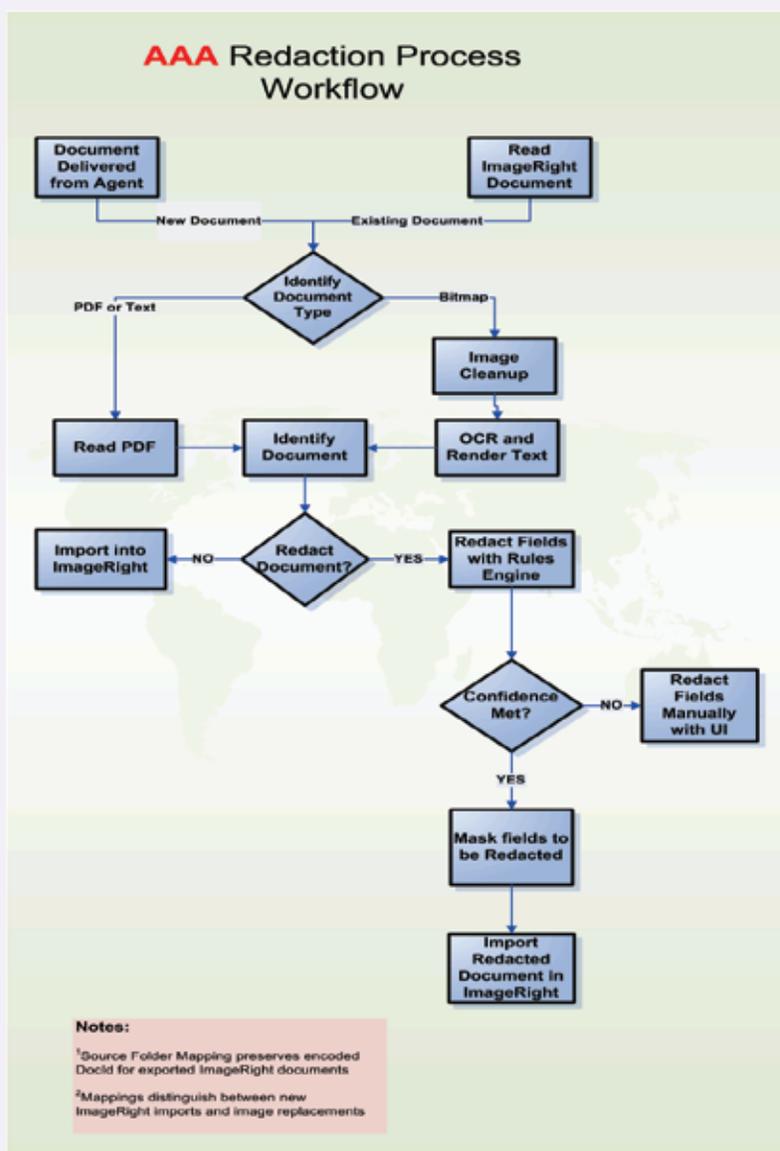
"During the intial phase of the project Paragon was instrumental in architecting a solution that would function in our environemnt. Their staff has been professional and exceedingly responsive to our needs. Paragon has been with us every step of the way. I feel we have a partner in Paragon and would highly recommend their products and services"

Arthur Law, Senior Project Manager, ACG-Auto Club Group.

AAA Redaction Process Workflow

Notes:
[1] Source Folder Mapping preserves encoded DocId for exported ImageRight documents
[2] Mappings distinguish between new ImageRight imports and image replacements