

The ICOGAM -Professional Association of Registered Agents of Madrid- saves more than \$5 million using Athento document capture technology



**ILUSTRE COLEGIO
OFICIAL DE GESTORES
ADMINISTRATIVOS DE MADRID**

"Our digitization service is a pioneer service thanks to Athento. The ICOGAM and Yerbabuena Software's teamwork has made possible to improve the service every day."

*Eduardo Cavanna
Traffic Services Director ICOGAM*



The challenge...

Making registered agents go paperless, capturing 700,000 files per year.

Registered managing agents are representatives who carry out administrative processes on behalf of private customers or companies. The **ICOGAM** -Professional Association of Registered Agents of Madrid- is one of the most important professional associations in Spain. This organization gathers 975 registered agents from 6 cities that belong to the region of Madrid.

Department of Motor Vehicle (DMV) processes such as vehicle registration are ICOGAM's association main scope. In fact, this non profit organization is managing 90% of DMV dealings in Madrid. For almost 80 years, the ICOGAM has been working to ease the daily agents' work.

Starting in 2010, the ICOGAM took on the task of expedite electronical processing of DMV files to their members. They began to use a new software platform called "OEGAM V5" (Online Office of Registered Agents of Madrid). From that moment, registered agents were able to send electronic applications to the Spanish General Directorate of Traffic (spanish DMV, www.dgt.es).



ICOGAM offices (Madrid)

This made application processes faster, but still, agents had to deal with lots of paper documents and the time it takes to archiving those documents. Besides, managing paper documents costs 0,83€ per document to agents. It was a high cost to afford. For example, when registering a new car, an agent has to submit an average of 6 different documents. This means that registering vehicle process costs 4,98€ due to document managing.

Each year, Madrid's Registered Agents combined spent over \$ 5 million working with paper documents. That was really an issue.

Trying to make it easier to their members, the ICOGAM decided to take charge of the digitization of their agents' files. 700,000 records each year had to be scanned, captured and stored. But having the files in a digital format wasn't enough to solve the problem of registered agents. They also needed to have available data from their files at every moment. At this point, data extraction accuracy was one of the most important concerns at ICOGAM. Because this data is used for official traffic processes, it needs to be highly reliable. This seemed a hard task to accomplish.

The solution...

Athento Capture technology automated document capture, batch separation, document recognition, classification and data extraction.

The solution was designed as a set of layers. The first layer solves basic Document Management needs. This layer keeps the files safe and accessible at all times. For this layer we used a robust Document Management application with a Java Enterprise architecture, including tools such as Lucene for indexing, JBPM for Business Process Management and many other state of the art technologies.

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On top of the document repository, we placed a layer which main goal was to add advanced capture functionality to the repository layer.



Solution Architecture

Due to the large quantity of documents to be digitized, ICOGAM's employees scanned groups of files and saved them together in a unique file. They call that file "Macro-file". So, it was mandatory that the middle layer was able to separate that macro-file into individual files at the beginning and store them into the lowest layer (the repository layer).

Athento is an ECM software that adds advanced features to traditional Enterprise Content Management software. Those advanced features cover the 5 components of ECM: Capture, Manage, Store, Preserve and Deliver. Using its LEDES module (Load Extraction and Division Services), Athento was able to perform batch separation of documents.

It's in this layer where the magic occurs, not only because of the batch separation, but also because it's here where the system does all the hard work: document recognition, document classification and data extraction.

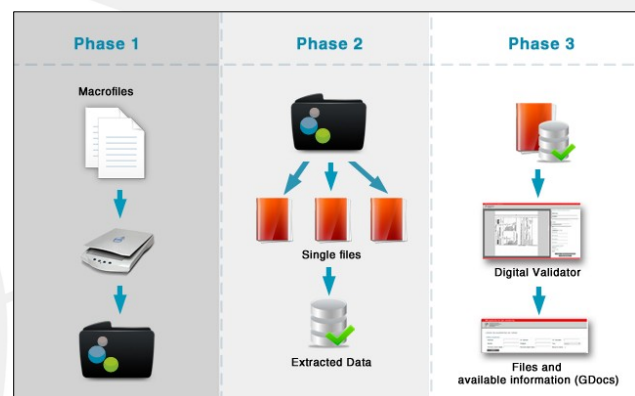
But let's explain the whole process. Once the documents are scanned as a macro-file they are sent to a hot folder. Athento monitors that folder, and every time a new macro-file is created, Athento starts its work. In order to separate

the batches, Athento must search for types of documents within the macro-file. Athento knows that each individual file starts and ends with a specific type of document, in this case, a file starts with a registration certificate and ends with an invoice or a 620 tax form.

To identify documents, Athento uses different processes: First, **Athento compares the document structure** with a document type template, using Neuronal Networks technology. If Athento isn't 90% sure of the document type, It performs a second process. This latest process involves applying **OCR, regular expressions and Natural Language Processing**.

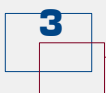
Once Athento has identified every registration certificate, invoice and 620 tax form, it proceeds to slice the macro-file into individual files. The ICOGAM wanted to use the vehicle registration number to name the files, so, first it was necessary to find it. Using its OCR engine, Athento indexes the whole document text and then, applies regular expressions to find data like the plate number, owners ID number, agent code, etc.

After data extraction, Athento names the files and stores them at the repository layer.



Operation of the system

As we said before, the data must be checked before it can be used. Both validation process and data access are available from the uppermost layer.



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This layer had to be lightweight and keep data available every time. For those reasons, two web interfaces were developed. One of the platforms, the “Digital Validator”, is used by the ICOGAM employees to validate and verify the results of data extraction and files division. The other one, “GDOC”, is the platform that registered agents use to view data from the digitized files. The agents can also visualize files securely without downloading them 24 hours a day.



Yerbabuena trainers at ICOGAM

This three-layer system model has allowed agents to save money and time, employees can digitize files faster, and the ICOGAM has made happy their members.

The results...

2,000 files processed daily and more than \$ 7,000 cost savings per day.

423,637 system access and 20 users working with the validator platform every day.

Registered agents don't have to archive files anymore or afford storage cost on cabinets or cost of labor (time!) working with paper documents. This new system preserves the files much more efficiently and keeps the data accessible.

Using the new system means saving over \$ 7,000 per day to the whole agents' collective.

The system is very accurate, the day before this success case was written, 1,871 files had been processed, from them 1,531 was correctly divided, named and its data extracted (82.14%).

The ICOGAM is planning to increase the number of files processed per day to 3,000 and even more, in further project stages. They are also thinking about signing the files digitally, making it possible to destroy the original paper files.

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ICOGAM

Key data:

Savings: \$ 5 Million

Files Processed per day: 2,000

Next goal: 3,000 files processed per day

Software: Athento iDM 1.3

Hardware: Intel Xeon E5540 2.5GHz, 8GB RAM

Project Screenshots

The screenshot displays a web application interface for document validation. At the top, a red banner indicates "190 expedientes han sido validados hoy". The main area shows a scanned document of a vehicle registration form. To the right, a sidebar titled "Campos extraídos del documento" lists extracted data fields:

- Matricula:** 2559
- Bastidor:** KMYBA4BLSAC30
- Tipo de tasa:** Transferencia
- DNI Vendedor:** 2942
- DNI Comprador:** [Empty]
- CM Comprador:** [Empty]
- CM Vendedor:** [Empty]
- Fecha de validación de tráfico:** 06/07/2011
- Poderes en ficha:** NO

Buttons at the bottom of the sidebar include "Validar", "Incorrecto. Pasar al siguiente", and "Volver a pendientes".

Digital Validator: Extracted data validation screen

The screenshot shows a search interface for documents. A red banner at the top indicates "186 expedientes han sido validados hoy". Below the header, the text "Listado de expedientes sin validar" is displayed. A "Filtrar expedientes" section contains the following search criteria:

- Matricula:** [Input field]
- Bastidor:** [Input field]
- Fecha de creación desde:** [Input field]
- CIF Vendedor:** [Input field]
- Colegiado:** [Input field]
- Fecha de creación hasta:** [Input field]
- CIF Comprador:** [Input field]
- Tasa:** [Dropdown menu]
- Buscar en macros:**

A "Filtrar" button is located at the bottom left of the search area.

Digital Validator Search Tools

