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## ***CASE STUDY: FRENCH MINISTRY OF DEFENSE***

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## ***Records Management Solution Employing Handwriting Recognition Tools Makes Millions of Historical Handwritten Government Records Accessible to the Public***

### **OVERVIEW**

On November 11, 2003 – the 85<sup>th</sup> anniversary of the cease fire that ended World War I – the Archive Department of the French Ministry of Defense made 1.3 million World War I patriots' records available on the Internet using a robust records management solution that employs A2iA's recognition tools.

The Ministry of Defense is committed to preserving the memory, heritage and archives of those who participated or gave their lives during the conflicts of the 20<sup>th</sup> century. By making public the records of deceased military personnel, the Ministry of Defense has enabled the general public to share in its mission of preserving and honoring the memories of the men who fought for France during World War I.

### **CHALLENGE**

Each government record consists of handwritten information: name, date of birth and birthplace; date, place and cause of death; military rank; recruitment data; etc. However, many of the 1.3 million records also contain medical information that needs to remain confidential in order to meet the privacy requirements set forth by French legislation. The Ministry of Defense required a solution that could extract the handwritten information, while indexing and making available for searching on the Internet only the details that were considered public information.

The end result needed to be an easy-to-use searchable archive that preserved millions of historical documents and protected the sensitive information. To do this manually using traditional data entry would require a significant amount of manpower to hand key all data and would take years to complete.

### **SOLUTION**

A records management solution was designed and installed to handle the conversion of the historical government records to electronic images, as well as the extraction of data contained on the records for ease of searching by government officials and the general public. The hardware and software used in the solution were installed at two service bureaus that handled the document and data conversion processes.

The forms were scanned on Kodak production scanners to capture the images. Fundamental to the records management solution was A2iA FieldReader, used to reduce manual keying by automatically extracting the form data from the captured images.

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**THIS RECORDS MANAGEMENT APPLICATION IS BEING EASILY ADAPTED TO MEET SIMILAR NEEDS IN BOTH GOVERNMENT AND BUSINESS ENVIRONMENTS – IN THE UNITED STATES AND ABROAD.**

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The Ministry of Defense chose to partner with A2iA for their ability to accurately and efficiently read cursive handwriting. A2iA adapted its recognition engines to improve its performance on the handwriting style of the early 1900s.

“Our recognition engine is extremely flexible and intuitive,” said Jean-Louis Fages, president and chairman of the board of A2iA Corp. “We can fine-tune the recognition algorithms for language and era-appropriate handwriting – in this case, the French handwriting styles from nearly a century ago.”

### **SOLUTION (CONTINUED)**

A2iA FieldReader automatically extracts the handwritten information contained on each record and returns a confidence score. If the score falls below the user-defined confidence threshold, where A2iA FieldReader is not certain of the accuracy of its results, the image and results are sent for verification by a human operator or sent for keying from image.

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**THE MINISTRY OF DEFENSE  
PROJECT HAS PROVEN THAT  
A2iA FIELDREADER CAN EXCEL  
EVEN WHEN FACED WITH THE  
MOST DIFFICULT DOCUMENTS.**

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To enable searching using different fields and criteria, A2iA FieldReader indexes several of the form fields it captures. For example, records can be searched by name, birth date, date of death, etc.

The “Cause of Death” field is recognized using A2iA’s Intelligent Word Recognition technology. It matches the handwritten information against a vocabulary of approximately 2,000 words and phrases that describe causes of death.

To ensure proper classification and confidentiality, A2iA FieldReader automatically determines which records contain sensitive medical information and enables the Ministry of Defense to effectively post only the details deemed to be public information. It does this by searching for medical keywords, which are matched against a dictionary containing 260 medical terms. Depending on the presence or lack of a medical keyword, the record either remains classified or is posted on the web site.

### **RESULTS**

“Since its launch, the French Ministry of Defense’s records access web site has been a tremendous success,” said Fages. “Without A2iA FieldReader, and due to the significant amount of manual labor that otherwise would have been needed to convert the paper-based information into electronic data, the records may never have been available for public searching. We are very proud that A2iA FieldReader is part of a records management solution that now enables citizens to access information that remained unavailable for nearly a century.”

At its launch, 1,329,640 records were made available online for the public to search. Since that time, an additional 149,741 documents have been added, pushing the total to over 1.4 million.

More than two million unique visitors have conducted nearly 6.8 million searches. The Ministry has received 1,858 e-mails thanking them for making this information available and 1,368 e-mails pointing out duplicate records or correcting small errors.

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**THE RECORDS ACCESS WEB SITE  
HAS RECEIVED A 96.54 PERCENT  
SATISFACTION RATE BY USERS.**

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While A2iA FieldReader did not completely eradicate manual keying, it reduced the keying by 60 percent. Accuracy rates of one reject in 1,000 at the document level (not character or field level) were achieved. These results accelerated the project and reduced the costs. The project was put in place ahead of its deadline and continues to be a great success.

This records management application is being easily adapted to meet similar needs in both government and business environments – in the United States and abroad. A2iA FieldReader can capture data from any form – even delicate legacy documents containing sensitive content – in any one of six languages (English, French, German, Italian, Portuguese and Spanish). The Ministry of Defense project has proven that A2iA FieldReader can excel even when faced with the most difficult documents.