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The digitisation of 1.5 million hand-written registers in Spain

By Ulrike Weigelt

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We were excited when we heard about the Spanish Ministry for the Interior's plans to implement this large-scale project. It was interesting not only from a commercial viewpoint, i.e. how to make the project logistically viable, but also because of considerations such as how to reconcile quality assurance requirements with project requirements.

These weren't the only issues discussed in October 2007 at ImageWare Components GmbH in Bonn. It didn't take us long to calculate that the project involved 1.5 million books, each with around 600 pages. In other words, there were around 900 million, mostly colour pages up to A3 format to be scanned in this mass digitisation project; a project that would set European benchmarks, as CEO Rüdiger Klepsch and his team soon realised.

Scanning precision

The hand-written registers dating from 1954 to 1980 are located at more than 1,000 registry offices. They include marriage, birth, death and divorce certificates which frequently have to be copied and issued in response to Spanish citizens' requests. Not only do the Spanish authorities' registers come in different sizes, the staff at different registry offices also used different types of paper. Some of the registers are in a very stable and well-preserved condition. Others have brittle paper or special hand-written elements in different type, intensity and ink colour, additional notes or coloured stamps which have to be reproduced in the copies.

It takes quite some time to source the documents, take them out of and put them back into the registers and then return them to the paper archives. Often, it takes the archive staff several attempts to produce a true-to-original copy. All in all, it is a time and cost-intensive procedure which the Ministry for the Interior hopes to optimise. Another parallel objective is long-term

archiving to ensure that the documents are stored for the statutory archiving periods and to prevent them from perishing.

Grey scale or colour scanner?

In a pilot phase, which took place in autumn 2007, the Spanish project managers set out the quality criteria to be included in the call for bids. During this pilot phase, the customer realised that the objective to be achieved within the given budget and timeframe was in compliance with long-term archiving quality requirements. These requirements include colour fidelity and (almost) identical copies of the original documents. That's why the original plan to specify grey scale scanners in the call for bids was revised and colour book scanners were requested.

The project was divided up into several lots and contracts were awarded to three Spanish service/ systems providers. Two of these companies are ImageWare Components' partners.

The data basis

A digital index existed for each register before the project commenced. The first task was to import these basic files into ImageWare's BCS-2® scanning software. All pages which have been (and are being) scanned are assigned to the electronic indexes.

The first step in this procedure is to scan a double page. Then, a virtual page break is created and the page is indexed. The data obtained in this process is then allocated to the existing digital indexes.

To guarantee colour fidelity and compliance with quality requirements, colour reference targets (colour reference templates) are used and attached to every scan. Measuring the colour fields enables the immediate identification of colour deviations, which can then be corrected in downstream routines.

The result is electronic registers of around 600-700 MB in size. These registers are stored on external media (USB hard disks) and transferred to the central data archive,



where each electronic register is opened by the data manager so that the new images can be imported into his or her own processing software.

Over the course of the project, the registry offices will be provided with completely digitised registers containing the indexes, the images and the data from the processing software.

This will considerably reduce the registry staff's workload because they will be able to issue documents or copies at the touch of a button. The time gains as a result of register digitisation benefits both the registries and the citizens requesting certificates or copies.

Special aspects of the project

Most Spanish registry offices have cramped rooms that are too small for some conventional book scanners. The task of fitting several pieces of equipment in these rooms while still leaving enough space for the scanner operators to work has been quite a challenge.

The registry offices' opening hours are another logistical and organisational challenge because scanning work can only be carried out during these opening hours. The scanning personnel need special training to ensure the fast set-up and installation of the book scanners and timely project close-out. This aspect was discussed by the Bonn project crew at the end of 2007. They considered how they could support the Spanish partners in training the scanner operators, how they could minimise the number of reject scans and how they could ensure that the equipment could be used to optimum capacity?

The solution they came up with comprised several days of in-depth technical training provided to the Spanish partners at ImageWare in Bonn so that the Spanish trainers were able to provide local support to the scanner operators.

Obviously, a project of this size will inevitably encounter the occasional hitch. "You have to play some things by ear in this kind of a mammoth project," said CEO Rüdiger Klepsch. "Our support team members made one or two unscheduled trips to Spain in addition to the basic support services that we agreed. The devil's in the details and it would be unrealistic to maintain that we can foresee and plan for everything in advance."

Implementing this project has further consolidated ImageWare's more than ten years of experience in national and international



digitisation projects. And how is the project progressing in Spain? We're still using approx. 45 Bookeye® book scanners to digitise the registers.

It remains to be seen whether the electronic long-term archiving of the registers in Spain will be followed by further digitisation projects. All project participants agree that the key factors are close collaboration during the project term and an honest after action review when this large-scale digitisation project closes out.

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