Techniker Krankenkasse keeps bonuses on form with the Foxit PDF Compressor

First, customers apply for the TK's bonus programme and record their participation in healthy activities in their bonus booklets. These include early-warning and pre-emptive checkups, health courses and sports activities. There are four different bonus booklets depending on age group: up to 14 years, 15 to 24 years, 25 to 49 years and 50+ years. Depending on the number of activities completed, customers can receive three tiers of cash reward.

To that end, customers send the booklets to the TK's address in Hallbergmoos. There, they are placed into a fully automated scanning system constructed specifically for this purpose. This first removes the staples from the booklets by cutting them out, then feeds the pages one at a time into the scanning system. This is where several OCR engines from software specialist SkySoft come into play. The previously-defined fields, such as handwritten entries, stamps, DataMatrix codes or check boxes, are read out.

From scanning to PDF

In order to recognise stamps and handwriting precisely, the colour images must be scanned as TIFF files. Up to 6,000 bonus booklets are processed every day. "In TIFF format, however, the images are around 50 megabytes, which makes them too large to send off or to archive", explained project manager Lars Traben. The TK therefore sought out a solution designed for archiving and compressing documents to save space. As the TK already uses PDF/A for other projects, the decision was quickly made to use the PDF/A format, which guarantees long-term presentability, readability and availability of information. The next decision was to use the Foxit PDF Compressor Enterprise. Not only does it generate ISO-compliant PDF/A documents, it also contains an award-winning mixed raster content (MRC) system. This compression technology compresses colour scanned PDFs to the same size as black and white TIFF G4 files. The outstanding image quality and readability of the text are preserved, even with a 100-fold compression ratio. These optimal compression results allow for minimal storage costs and bandwidth requirements while maintaining quality, which means in particular that network overload is avoided. Moreover, the solution has been designed to be integrated into existing processes. The Foxit PDF Compressor runs in the background as a Windows service and checks a directory (including sub-directories) at specific time intervals. Every new TIFF-format image file is automatically converted into a PDF/A document. The compressed PDF/A files are handed over through an interface from Hallbergmoos to the TK's user system TKeasy in their accounting centre in Hamburg. There, customer data is processed. "As the scanned images are only around 50 kilobytes in size after compression, they don't overload the data line, which we need for other applications", explains Traben.

Digital signature provides potential for optimization

The data is received by the downstream TKeasy processes and passed on to the TKeasy post-processing system. There, the relevant data sets for postal dispatch are generated from the scanned and delivered data. These give information as to which tasks are pending in connection with the relevant transaction, for example whether other checks need to be carried out or whether the premium should be paid.

In Hallbergmoos, the scanned booklet pages are collected and stapled in a collection tray at the end of processing. Their journey then takes them into the archive. "We have to retain the bonus booklets for six years", says the project manager, explaining the legal background. This is because the TK has not yet linked the images to a qualified digital signature, meaning that a recognised electronic audit is not yet fully possible. Not yet. In order to simplify the process further, the TK plans to introduce digital signatures. The system should be ready in April 2012. "Then we can destroy the bonus booklets", says Lars Traben.