Case Study

Postal service providers

The initial situation:

Before the start of the project, the customer was using a semi-automatic data acquisition system, which processed approx. 2,000 pieces of letter and info post within an hour. In the 2-shift system, the mailings volume was sorted manually by 30 employees in each shift. Delivery control and invoicing of the consignments were done manually by using paper lists.

The challenge:

A business process analysis revealed a potential for making 30% savings on the time and re-sources required for sorting with the use of an automatic mailings recording system. Within the framework of this project, we had to develop and construct a hardware and software solution for the automatic recording and sorting of mailings. In addition to mailings assignment

using barcode labels, statistical evaluations of the mailings volumes and carrier lists were also to be generated.

The solution:

The challenging project requirements were able to be fulfilled with the installation of a sorting line consisting of post feed, image recording, identification, labelling, sorting and several video coding stations.

Two automatic feeders deliver the postal items onto the conveyor belt which has a length of 10 m. A line scan camera records the addresses, barcodes and the customer's own marks (e.g. frankings) at a belt speed of 1.0 m/s. The intelligent address recognition system reads the recipients' addresses and compares these with the customer's own sorting list with 12,000 addresses. An increased reading rate and shorter recognition times are achieved by a text recognition system for handwriting and typescript specially optimized for addresses.

Once the recipient's address has been fully identified and compared against a databank, a sorting number will be allocated and this will be attached using a label printer. If the recipient's address is incomplete, the image of the mailing

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is transmitted to a video coding station. Here the address is manually completed and the sorting data is sent to the printer. The revised mailing can also be subsequently fed back onto the sorting line again, where it will be automatically assigned with the address information which is now complete.

All mailings with valid sorting numbers get into a flat sorting system with a compartment for each delivery area. The sorter is fully automatic, scaleable and achieves throughput rates of up to 7,200 items per hour.

A data bank system was connected to the mailings recording system for monitoring and analyzing the mailings volume. All procedures and mailings data (including images) are managed in the data bank and stored for a period of 3 months. In this way, all procedures which have taken place in the last 3 months can be retraced in detail. A statistics and complaints module enables evaluations to be carried out with regard to specific customers, mailings, orders and carriers over variable periods of time.

The result:

By optimizing the company's business processes the customer was able to improve his price/performance ratio and reduce time expenditure by more than 50%. By using the automatic feeder and a speed optimized address recognition system, a throughput of 5,000 mailings per hour was achieved.

In addition to lower costs, the customer has been able to offer new services, such as accurate mailings tracking. Detailed statistics and evaluations allow the customer to calculate precise mailings volumes in piece numbers and also simplify the task of processing complaints. In-house, new possibilities are created for the quality control of carriers and for the optimization of processes. The positive effects of this project extend far beyond the sole task of mailings recording and improve the customer's ability to compete.

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