Maximum precision with maximum throughput rates

Omron and ruhlamat develop an image processing system with 100% checking.

*Marksuhl, Dezember 2008 - ruhlamat is a middle-sized manufacturer of special machines based in Thuringia, specialising in smart card and passport process technology and installation techniques. Among other things, the company creates machine systems for the production and processing of smart cards and passports, a sector in which a 100% reliable optical quality check is vital. In close co-operation with ruhlamat, Omron have been developing **Xpectia**, an authentic-colour image processing system with guaranteed 100% checking.*

Thanks to the greatest possible precision and fastest possible software processing, this system can easily keep pace with the rising production speeds in the smart card and passport production sector. For ruhlamat, this technological development represents another stride forwards in their co-operation with Omron, a relationship which has now lasted more than 10 years.

Decisive for the joint development of **Xpectia** were, on the one hand, the implementation of precision, speed, user-friendliness and flexibility in one system and, on the other hand, the rectification of defects of the predecessor system. Particular problems here were the testing times at the end of the machine cycle in the text-recognition area, as well as the fact that the operation of the image processing system required an extensive familiarization period.

The ease of handling **Xpectia**, thanks to its Windows-based software control and an individually adaptable user interface, is precisely what the machine operators need in order to display only the parameters which are of relevance to their purposes.

As well as the perfect production of smart cards and ID cards and passports, the subsequent optical quality control has a very important part to play. “If we reach throughputs up to 6,500 cards/hour, information on cards or in passports which is incorrect, or even missing, is absolutely unacceptable and must be avoided at all costs. **Xpectia** is the reliable aid needed to identify any errors like this, and so allow the item concerned to be screened out and removed. Today, the cycle times for the quality controls themselves are also becoming increasingly shorter. As the tested products have to be supplied, positioned and subsequently removed again, there is relatively little time for the actual testing process”, according to Christian Ortmann, technical designer and specialist for image processing at ruhlamat.

Focus in the development of **Xpectia** was on solving and circumventing the problems which can arise due to different character sets or quality differences being used when cards or passports are being printed. This was achieved with the introduction of a check algorithm for text identification (OCR – Optical Character Recognition), which makes it possible for new font stocks to be read in effectively and even partly automatically. A much faster reading speed and genuine-colour image processing are additional criteria which make **Xpectia** a system with even more reliable measurement results. Shiny surfaces, such as, for example, on personal identity cards, are likewise no problem for the new system.

ruhlamat obtained positive feedback from customers as early as one year before the official market launch in Europe. As well as the innovative **Xpectia**, Omron also provide programmable controllers, drive technology, and sensors, and both companies are looking forward to a future founded on a close business relationship.

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Omron
Headquartered in Kyoto, Japan, Omron Corporation is a global leader in the field of automation. Established in 1933 and headed by President Hisao Sakuta, Omron has more than 35,000 employees in 34 countries working to provide products and services to customers in a variety of fields including industrial automation, electronic components industries, and healthcare. The company is divided into five regions and head offices are in Japan (Kyoto), Asia Pacific (Singapore), China (Shanghai), Europe (Amsterdam) and US (Chicago). The European organisation has its own development and manufacturing facilities, and provides local customer support in all European countries. For more information, visit Omron's Web site at www.industrial.omron.eu

ruhlamat is a traditional machine manufacturer from Thuringia, specialising in the areas of smart card and passport technology as well as assembly engineering. With a workforce of over 350 people in North America, Asia, and Europe, the company has grown steadily over the past few years and is the most successful company of the Mack Holding GmbH. With complete machine solutions from planning and development through to manufacturing and assembly ruhlamat is a qualified contact in special engineering. For a fuller picture of ruhlamat, visit the Homepage at www.ruhlamat.de.

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