## Please produce your Passport

Kugler-Womako's equipment and expert guidance enable countries to manufacture passports themselves, as control over passport design takes on increasing importance.

Recognising the International Civil Aviation Organisation (ICAO) requirement to have machine-readable passports by 2010, and with new ePassport requirements looming, more African countries are considering the option of manufacturing passports themselves. Many already do produce their own machine-readable passports. And Sudan is currently constructing its own ePassport facility.

In addition to the advantages of security, savings, flexibility and speed, self-production is also a matter of national sovereignty and pride. And a government enjoys flexibility that allows more rapid production changes to enhance security, as well as the creation of local jobs and a market for local suppliers.

With security and reliability being prime considerations, of course, it is best to follow the self-production path with the help of an experienced pathfinder.

Kugler-Womako, a German manufacturer of finishing systems for the production of passports and similar products, offers governments the benefit of its extensive experience in this field.

The company will exhibit at drupa 2008, the world's largest printing and

print-finishing trade show, in Düsseldorf, Germany, 29 May - 11 June. Kugler-Womako personnel are also available to assist a potential producer at any time.

The company has made passport finishing systems for more than 30 years, and has more than 15 years' experience with passport personalisation systems.

Domestic production is most feasible where a country's passport volume is at least 200,000 a year. Typically a facility produces between one and 12 million passports a year.

When converting to production of machine-readable documents, it makes sense to consider incorporating ePassport capability at the same time. Several countries will soon require ePassport technology for visa waiver in entering passports issued after 2007.

Passport production lines can be multipurposed to produce other book-format documents, adding to the facility's economic feasibility. Full utilisation of local capabilities can yield significant savings. A passport line can also make documents such as bank savings books, genealogy records, birth certificates, pilgrim passes, retirement plan employment records, and automobile titles.

"The key to success is in producing a top-quality product with maximum efficiency," said Claus R. Fischer, Kugler-Womako's Director of Security Systems. "A wide range of design and production factors must be considered in order to achieve excellence in all regards. A passport is not a document for compromise."

Over recent years, passports with quality or designs that did not meet other countries' standards have caused passengers long delays and even possible refusal at some destinations.

Unfortunately, even ePassports are not all alike. Some designs and production methods do make compromises.

One of many considerations is where to locate the electronic chip. Options are to put it in the cover, between cover and end sheet, in an ID-card, or in the passport's centerfold. Kugler-Womako has determined that the centre-fixed chip, covered by printed pages in the middle of the passport, is the only option offering the full combination of savings, security, durability, privacy and long term appearance.

Kugler-Womako PassPort 1-4 machines







In this implementation, which the company calls the 'Golden Solution', Kugler-Womako PassPort 5 machinery inserts the chip slightly off-centre late in the production process. Centrefold placement also frees the book's cover to carry an aluminium mesh, adding durability and electronic privacy.

So far no country has fully adopted this optimal design, although it is approached by Japan and Australia.

"This design is our preference, but we are well able to accommodate all other types of passports that customers might want to manufacture," Mr. Fischer said.

Various production flows are possible in passport manufacture. Small-volume producers benefit from centralised, inline manufacturing, while large-volume producers find advantages in centralised production where some components are produced off-line, to be incorporated at some stage in the line. In large countries, the entire production process may be decentralised.

At some point in the process, the passport and electronic chip must be personalised with data specific to each individual applicant. The ICAO recommends that high-speed laser and chip personalisation be performed in one step.

Whatever production philosophy is preferred, it can be handled elegantly by Kugler-Womako's Passport 4-50 **Automatic Passport Initialisation** and Personalisation System. This machinery handles Chip Initialisation and Programming, laser perforation of the passport number, inkjet printing of personal data, gothic CRN computercontrolled impact numbering, fully automatic document handling, cameraverification of printing and perforation, and more, all at speeds of up to 3,000 passports per hour. In varying configurations, the system is currently installed in 20 countries.

## Guidance through the process

Kugler-Womako also provides speed of another sort.

The production timeline, from the initial contractual arrangements to distribution of passports to citizens, is typically 14 months. However, several stages in the schedule offer an opportunity to accelerate the process.



Kugler-Womako machinery ensures rapid passport production

Sudan, which will shortly produce its own new ePassports through a private company 100 per cent owned by its Ministry of Interior, took advantage of that opportunity. Assembly and finishing of Sudanese passports will be performed on Kugler-Womako machinery.

"The Sudanese government asked us to visit and discuss all the various options as to how to design the passport and configure its production inside their new secure facility," said Mr. Fischer. The Sudanese Minister of Interior was present at the contract signing in 2007.

Implementation stages are:
evaluation of proposals and contractual
arrangements; transport/logistics;
installation and start-up; site acceptance,
production testing and personnel
training; passport testing; initialisation
and personalisation of finished
passports; distribution to applicants.

If necessary, the timeline can be reduced to as little as eight months, including machinery delivery. In such a case, experience, quality control and planning are at their most critical.

Although Kugler-Womako manufactures only the tail-end portions of a full passport line (its machines do not print the paper) and does not serve officially as a general contractor, the company is fully willing to provide its expertise to the entire project.

"We are ready to help with sourcing, planning, partnering, answers to technical and budget questions, everything, in any way we can, so that what is delivered is essentially a turnkey system ready to be tested and run," Mr. Fischer said.

Recognising that, while one manufacturing approach might be optimal, other approaches meet some countries' needs, Kugler-Womako also modifies, upgrades or adds onto existing systems, as customers' desire. The company has hands-on experience with all possible passport designs, and with all existing programming and security concepts.

Kugler-Womako reports that it has approximately 100 passport machines operating in more than 50 countries throughout the world. The company's machines are designed and made in Germany, and the Kugler-Womako service network functions worldwide, backed further by the resources of the holding company Körber PaperLink (KPL). KPL is a supplier of system solutions for the paper and tissue industry.

## More information

Based on the findings of its project managers in a wide variety of situations, Kugler-Womako has created a checklist of topics for developing an ePassport personalisation approach. This checklist is available for the asking.

To learn more, phone Claus Fischer, Director of Security Systems, Kugler-Womako GmbH, at +49 (7022) 7002 0, or fax +49 (7022) 334 44, or e-mail info@kw.kpl.net.

Visit Kugler-Womako at drupa 2008, Düsseldorf, Germany, May 29 - June 11 Hall 11, Stand B62/C62 - Register at www. drupa.kpl.net/applicationform

Kugler-Womako GmbH Schlosserstraße 15 • 72622 Nürtingen • Germany Tel.:+49 (7022) 7002 0 • Fax:+49 (7022) 334 44 • E-Mail: info@kw.kpl.net • www.kw.kpl.net

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