Polycarbonate datapage from Trüb Switzerland

ICAO Regional Seminar on MRTDs, Biometrics and Security Standards

24-26 November 2010, Maputo, Mozambique

Ivo Schönenberger
Product Manager
Motivation, or why to introduce a new passport generation?

- Feeling of security
  - Offers citizens a better protection against identity fraud

- Emotions related to the passport
  - It’s often the first impression of the country of origin
  - Emotionally binds the document holder to his or her home country
Content

- Company profile
- Evolution of passport documents
- The datapage
- Security elements
- Biometric passport
- Discussion
- References and Summary
Company profile

- Swiss company
- Founded in 1859
- Leading supplier of high tier identity documents
- 16 years experience with polycarbonate documents
- Production and personalization of
  - passport datapages
  - national identity cards
  - driving licenses
  - banking cards
  - loyalty cards
  - access cards
- References in more than 30 countries over 4 continents
- Trueb group: 450 employees, over 300 based in Switzerland
Evolution of passport documents

Trade-off
- Security level
- Cost of document
- Cost of infrastructure
- Cost related to fight fraud

© 2010 – Trüb AG Switzerland – www.trueb.ch
The datapage

Datapage
- The datapage contains the holder and document data

Datapage with chip
- Integrated chip for storing biometric information

Datapage integration and personalization

Trüb datapage production

passport booklet prod.

passport personalization

delivery to citizens

option with chip or
Datapage made of genuine polycarbonate

Document body

- 100% Polycarbonate
- Fused under heat (180°C) and pressure, no adhesives used

- Highest resistance against chemical, thermal and mechanical stress
- Highest resistance against delamination and splitting
- Highest resistance against other counterfeit attacks (e.g. substitution of data page, chip replacement, etc.)
- Long life-span of card body, 10 years under normal use

Swiss ID card field-proven since 1994
Datapage hinge

Highly flexible datapage hinge

- Datapage hinge made of woven fabric
- Securely integrated into polycarbonate body
- Highly flexible hinge (>1 million datapage flexing tested)
  → Booklet remains open for border control
  → Booklet closes completely (privacy of owner)

VisiFab™

- Evidence if a fraudster tries to exchange the page by slicing the binding
- VisiFab™ UV: fibers in woven fabric visible under UV light
- VisiFab™ PRINT: printed fabric visible under normal light or UV light
Datapage personalization by laser engraving

High security standards by laser engraving

- True grayscale laser engraving
- Personalized data inside card body → evidence if illegally altered
- Long life-span of personalized documents
- Tactile personalization elements
- No consumables required for personalization, e.g. no secure laminates

Tactile laser engraving
ICAO compliant security features

High security level by combining several security elements

- Embedded Kinegram®
- MLI® - Multiple Laser Image
- Dynaprint®
- OVI® - Optically Variable Ink
- LFI® - Latent Filter Image
- PhotoLock™
- UV and IR Printing
- Security background
- Surface relief positive and negative
- IPI® / ICI®
- Chemical Marker
- ImagePerf®
- Fused datapage hinge
- VisiFab™
- tru/vision™
**New security and design feature for polycarbonate documents**

- High resolution true-color UV image
- High brilliance and excellent color reproduction
- Enhanced document security
- Various design possibilities
Biometric datapage with chip

**Polycarbonate datapage with integrated chip**
- Choice of ICAO chip and operating system
- Chip and antenna embedded in polycarbonate material

1st generation biometric passports
- e-passports with portrait and holder data
- Basic Access Control (BAC)

2nd generation biometric passports
- e-passports with portrait, holder data and fingerprints
- Extended Access Control (EAC)

Benefits of e-passports
- Security enhancement
- Automated or machine assisted verification, enabled with on-chip biometric data
Discussion

Degree of freedom regarding passport design

- Secure identity documents rely on a combination of security elements ...
- High security personalization by laser engraving
- Biometric data for introducing an additional security element

Trade-off in cost need to be evaluated by the issuing state

- Cost of documents
- Cost of infrastructure
- Value with respect to security level and cost related fight of fraud

Why not a step-wise approach?
Summary

Trüb’s datapage is the heart of your passport:

- Fused polycarbonate
- Highest resistance against thermal stress
- Fraud resistant construction
- Outstanding optical personalization
- Long life-span of personalized document
- Integrated electronics (option)
- Conform to the latest ICAO standards

Trüb supports a step-wise approach along your document roadmap
Thank you for your attention...

...visit us at our stand

Ivo Schönenberger
Product Manager
Card Products

Trüb AG
Hint. Bahnhofstrasse 12
CH-5001 Aarau

E-Mail: ivo.schoenenberger@trueb.ch
Phone: +41 62 832 22 36
Web: http://www.trueb.com