

Polycarbonate datapage from Trüb Switzerland

ICAO Regional Seminar on MRTDs, Biometrics and Security Standards

24-26 November 2010, Maputo, Mozambique

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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

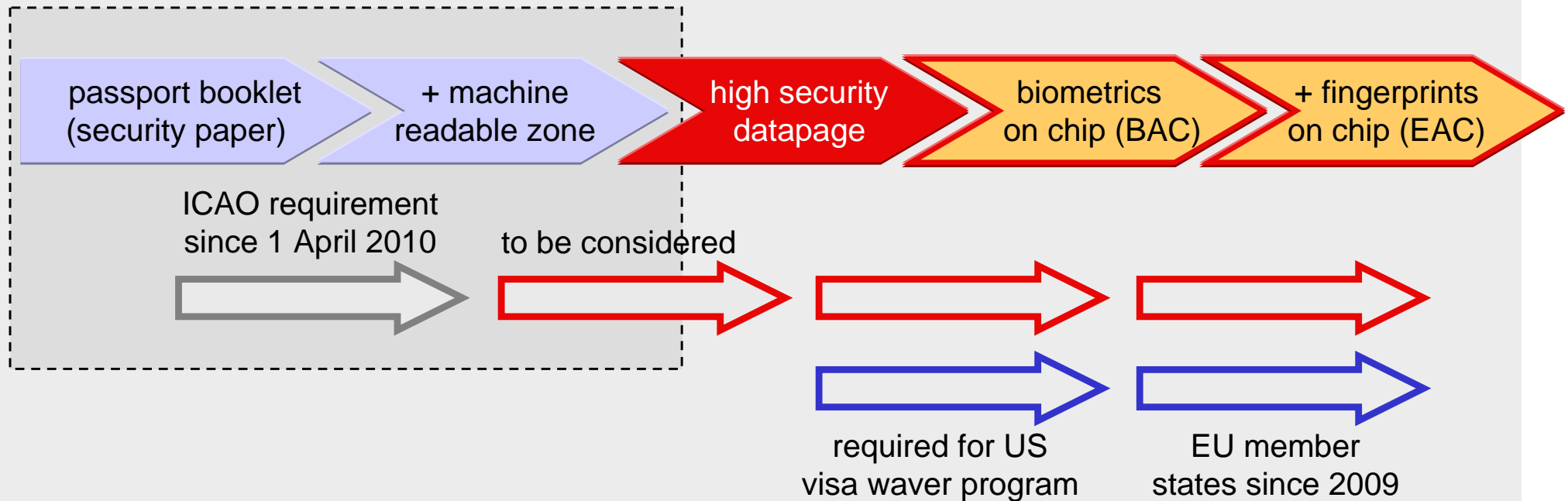
- Company profile
- Evolution of passport documents
- The datapage
- Security elements
- Biometric passport
- Discussion
- References and Summary

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

90 countries have introduced an e-passport
 Barry J. Kefauver, ICAO 6th Symposium 2010, Montreal

The datapage

Datapage

- The datapage contains the holder and document data

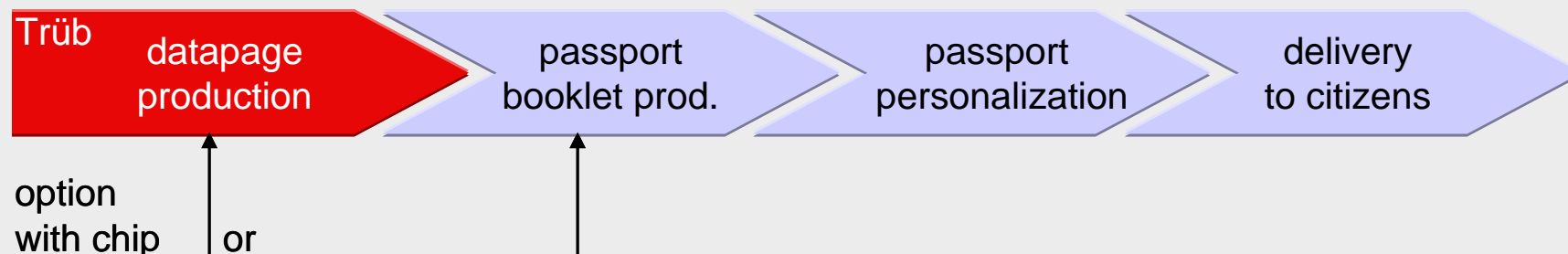
Datapage with chip

- Integrated chip for storing biometric information



machine readable zone (MRZ)

Datapage integration and personalization



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



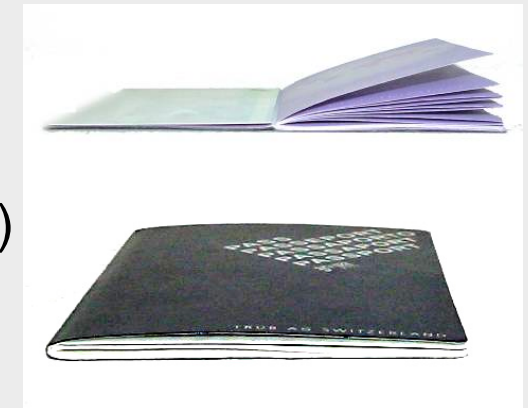
*Swiss ID card
field-proven
since 1994*



Datapage hinge

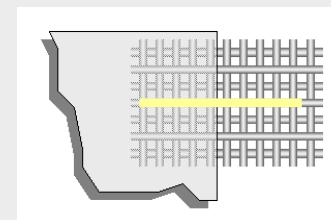
Highly flexible datapage hinge

- 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



VisiFab™ UV



VisiFab™ PRINT

Datapage personalization by laser engraving

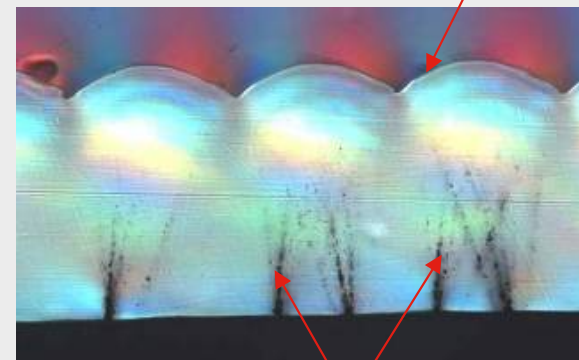
High security standards by laser engraving

- 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

Datapage section: MLI-structure

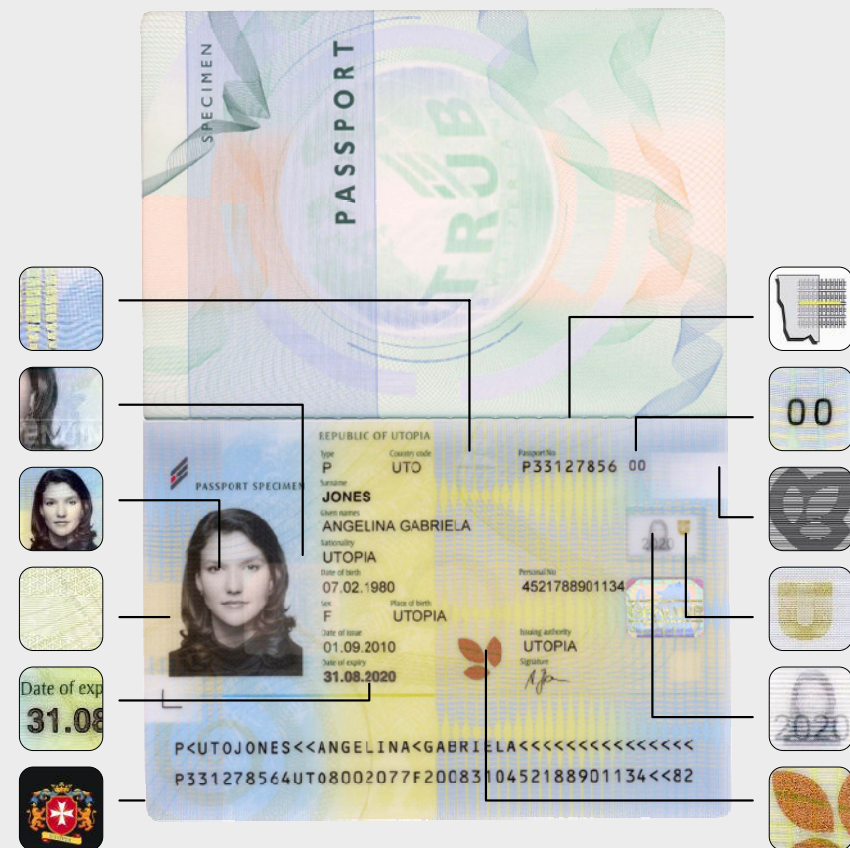


laser-dots

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™

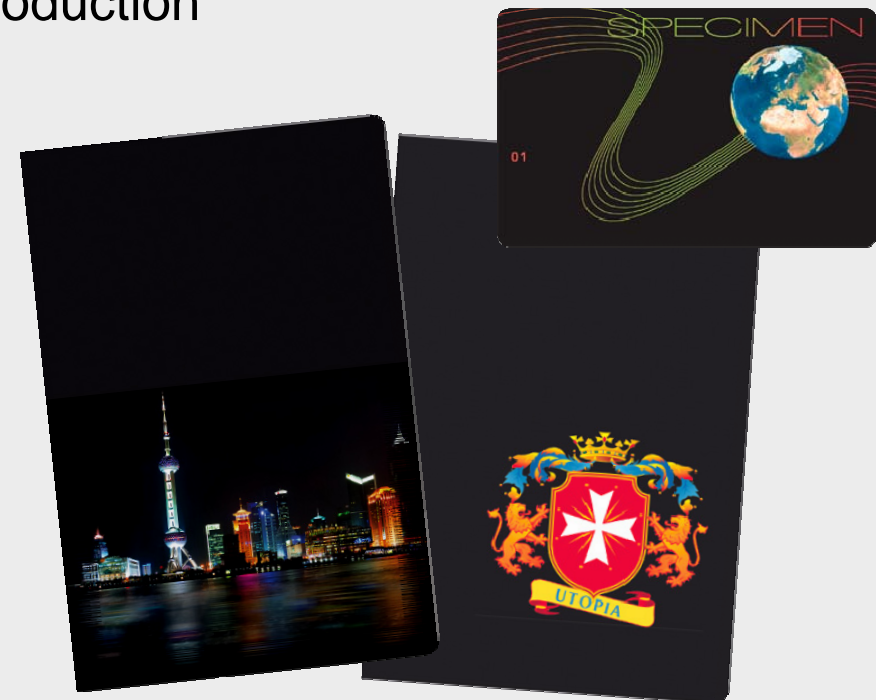


tru/vision™

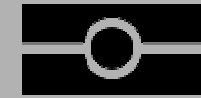
NEW at Cartes 2010

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  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



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