

**Latest Developments and Examples in  
respect to Governmental Security  
Documents**

**IOM Meeting in Managua, Nicaragua (14/12/2005)**

# Presentation overview

- Introduction
- Markets & Desire
- Why Polycarbonate Documents?
- Basic Security Concepts
- Polycarbonate project examples
- Summary

**Günther Heeb**  
*Head of Business Development*



# Introduction

- Trüb AG
- Environment of newest Governmental Documents

## Company outline

# Our mission



- **Our mission:**  
"Trüb Switzerland is a solution provider sufficing highest security requirements in respect to smart cards, documents, personalization and applications.

We are professionals, apt to provide worldwide our know-how and technology, and to maintain the leading edge of development.

We see our customers as long-term partners"

*Fernando Dal Zotto (CEO Trüb AG)*

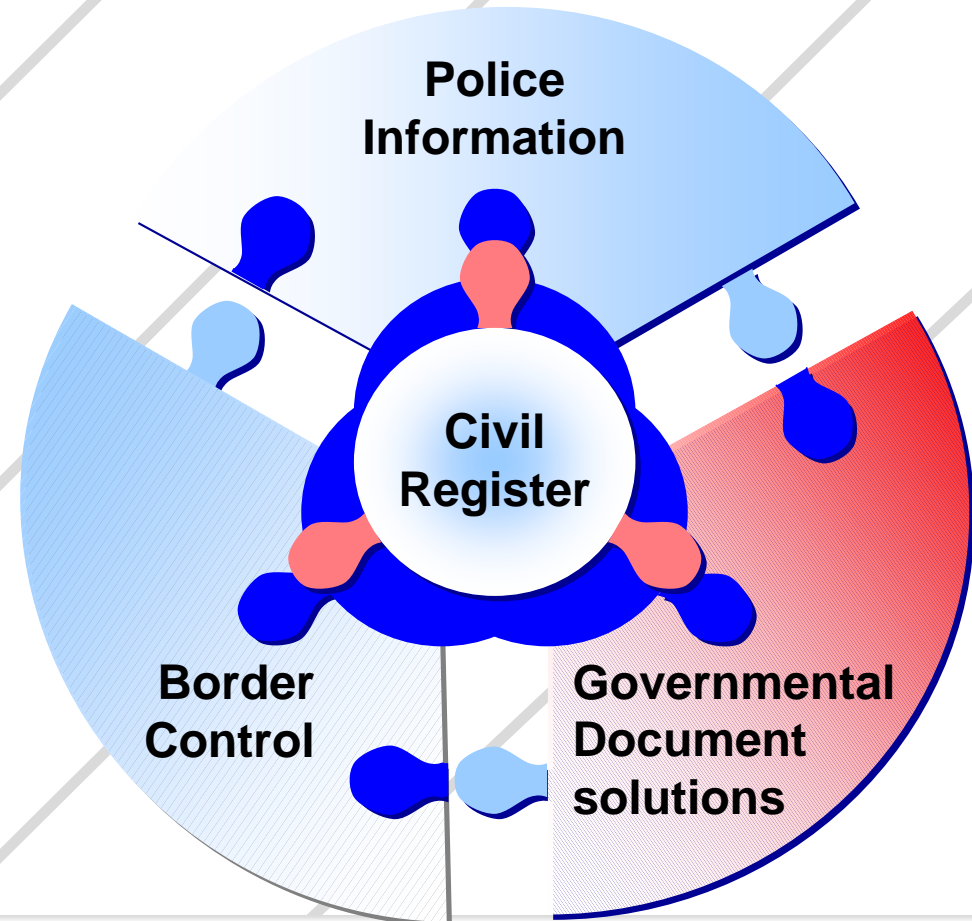
# Company outline

## Figures

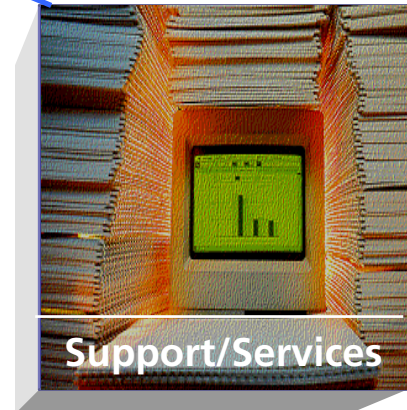
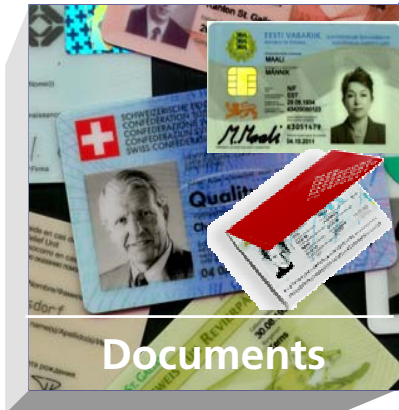
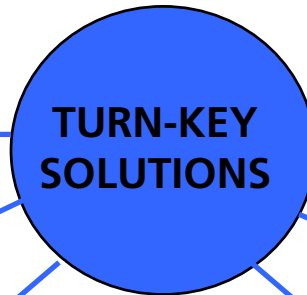
Staff	Production	Market share	Turn-over
<ul style="list-style-type: none"><li>▪ ~ 400</li><li>▪ &gt; 100 high Edu.</li></ul>	<ul style="list-style-type: none"><li>▪ 100 Mio doc p.A.</li><li>▪ &gt; 20 Mio Smart Cards</li></ul>	<ul style="list-style-type: none"><li>▪ No 1 in CH</li><li>▪ No 1 in Germany in Multifunctional Company Cards</li><li>▪ No 1 globally in High Security Docs.</li></ul>	<ul style="list-style-type: none"><li>▪ ~ 80 Mio EUR</li><li>▪ Privately owned</li></ul>
			

## Infrastructure

# Positioning of working and application fields



# Governmental Solutions Products & Services



## Introduction

# Geopolitical trigger



- Organized Crime
- Human Smuggling / Prostitution
- Organs
- Drugs
- Changing of Identities for various reasons
- US Patriot Act 404 / 504
- Biometric Passports to be introduced by 26.10.2006
- Pressure to authenticate the Document bearer with biometrical data





## Biometrical Identity document standards

### Trends in the market

- **Fraud protection**

Security printing on various substrates and products

- > Security documents based on “new” standards (f.e. EU regulations, ICAO, etc.)
- > HW / SW standardization and “open” source codes

- **ID verification**

Visual portrait, offline

- > 1:1 or 1:many identification (online&offline) using biometrics

- **ID validity**

Machine readable documents (MRD) and check with document register

- > Electronically readable data and automatic check document authenticity (incl. Biometrical data)

- **ID in process**

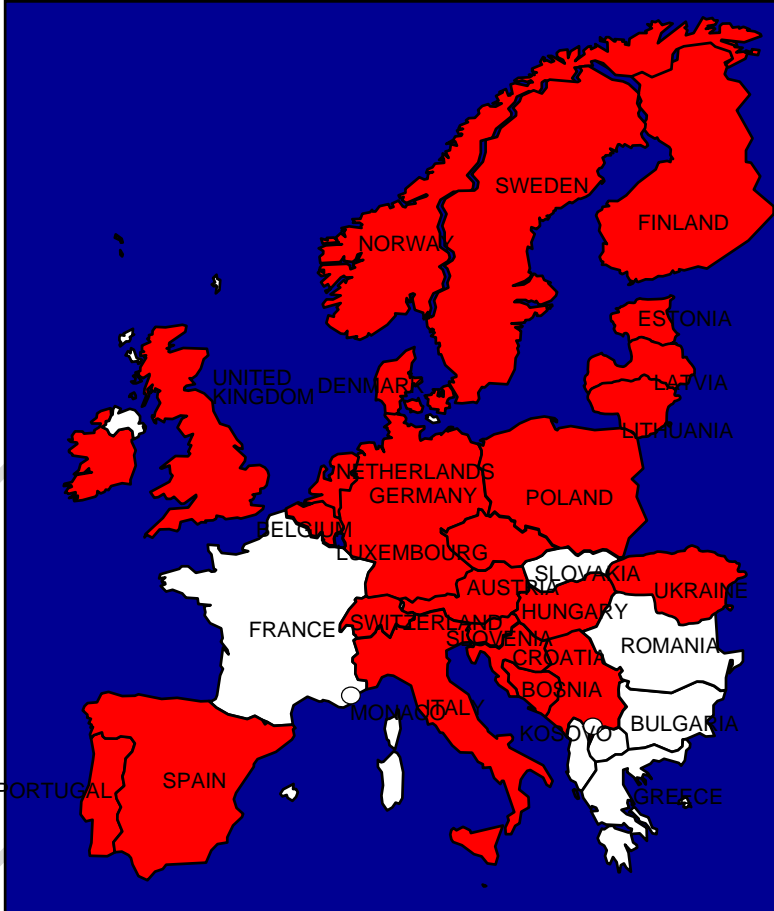
Personal validation of documents and identification of holder

- > Automatic border control and PIS with biometrical verification





# Polycarbonate Solutions References by Trüb AG (Exerpt)



Map of Europe showing countries and their status regarding Trüb AG references:

- Red (References):** SWEDEN, FINLAND, NORWAY, ESTONIA, LATVIA, LITHUANIA, POLAND, HUNGARY, UKRAINE, SLOVAKIA, ROMANIA, CROATIA, BOSNIA, KOSOVO, BULGARIA, GREECE, SPAIN, PORTUGAL.
- White (Other):** UNITED KINGDOM, DENMARK, NETHERLANDS, GERMANY, BELGIUM, LUXEMBOURG, FRANCE, AUSTRIA, SLOVENIA, MONACO, ITALY.

References by Trüb AG (Exerpt):

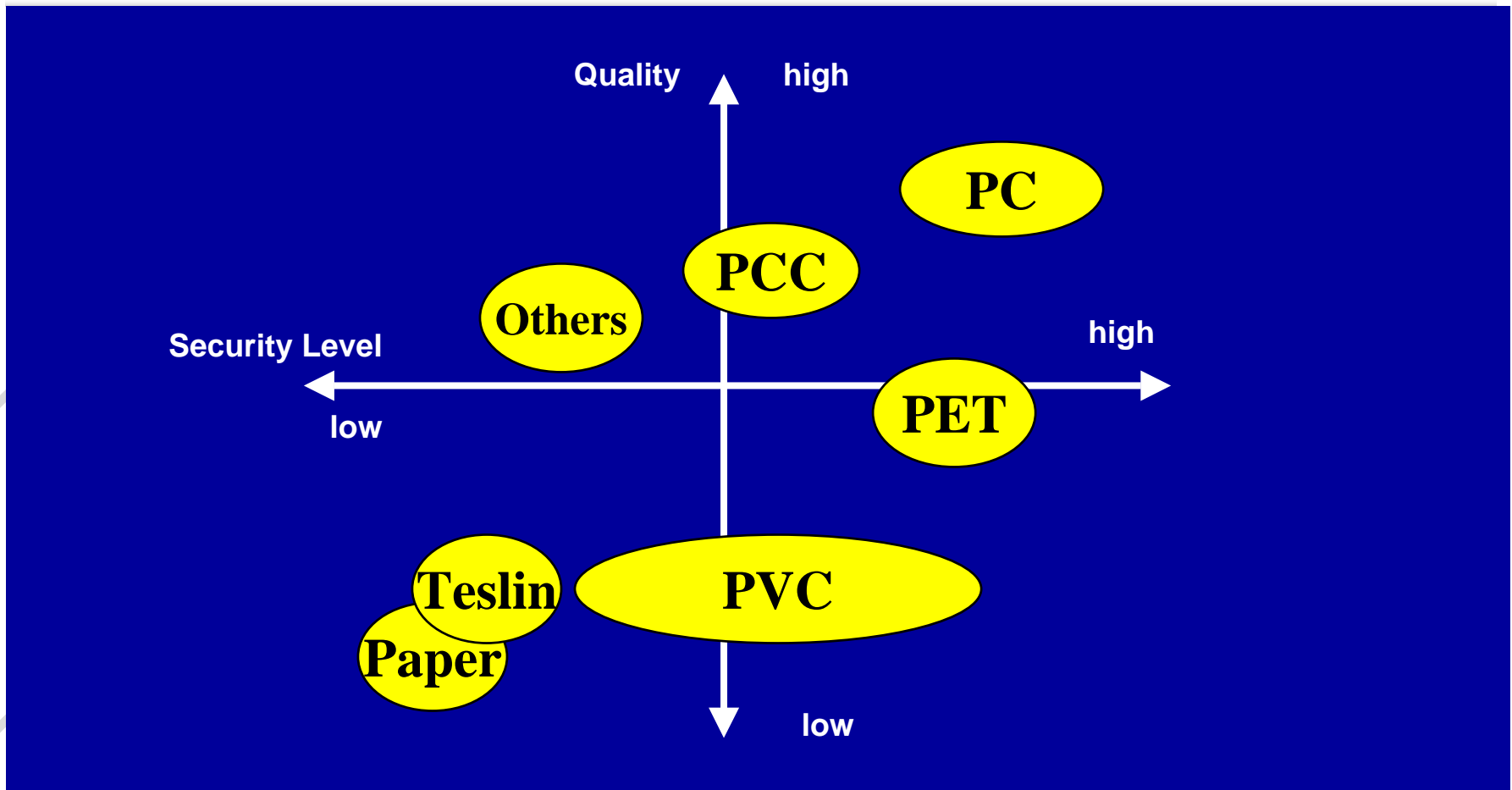
- Switzerland (1995 / 2003)
- Poland (2000)
- Estonia (2001)
- Hong-Kong (2002)
- Ukraine (2004)
- Czech Rep. (2005)
- England (2005)

Confidential © 2005 Trüb AG Switzerland

# Why Polycarbonate ?



# Polycarbonate Technology Positioning



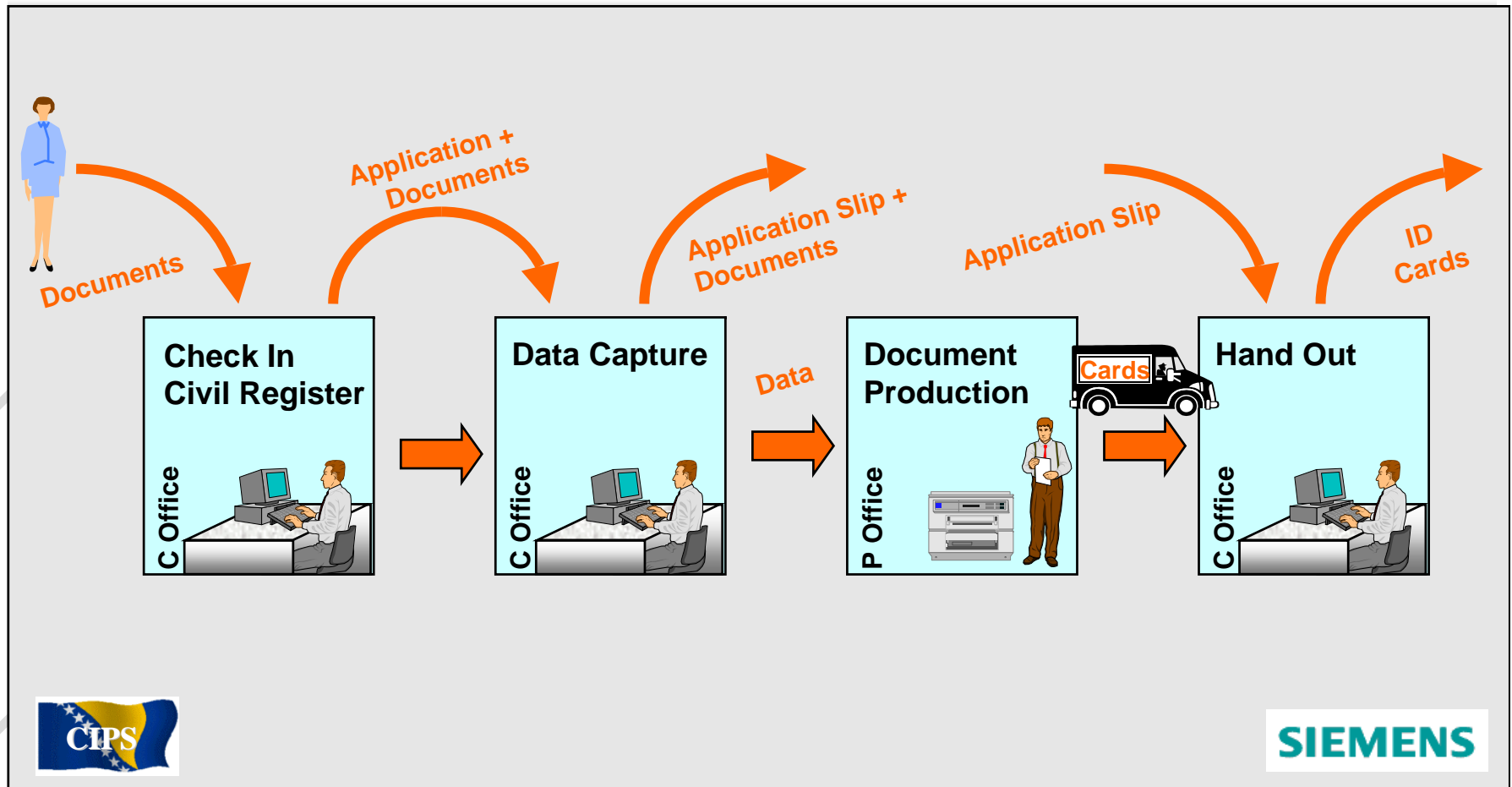


# Basic Security Concepts

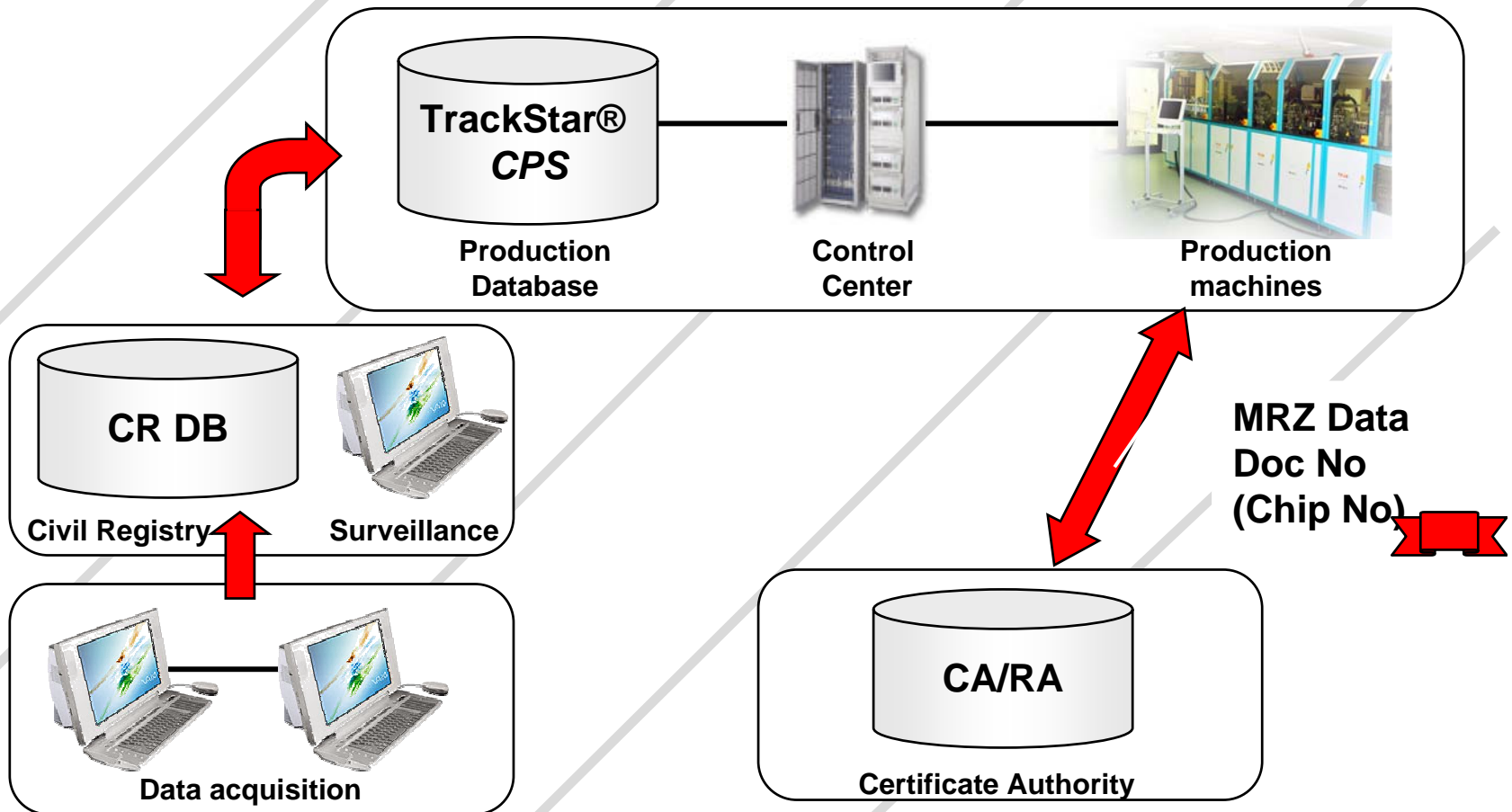
- Issuing
- Personalisation
- Documents



# ID Application and Issuing Documents with optical and electronic data

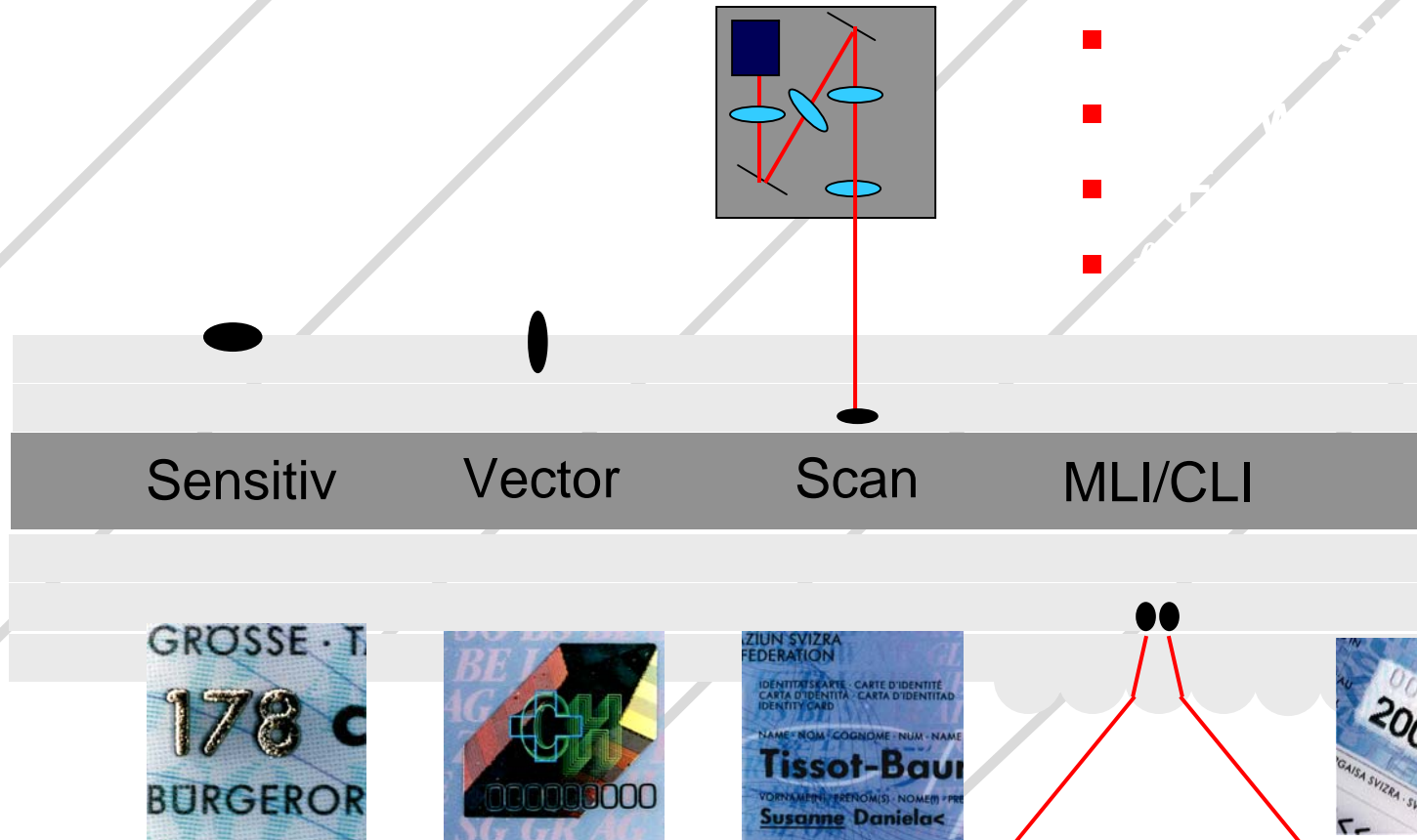


# System Laser Personalization Center Workflow overview



# Personalisation of Polycarbonate Documents

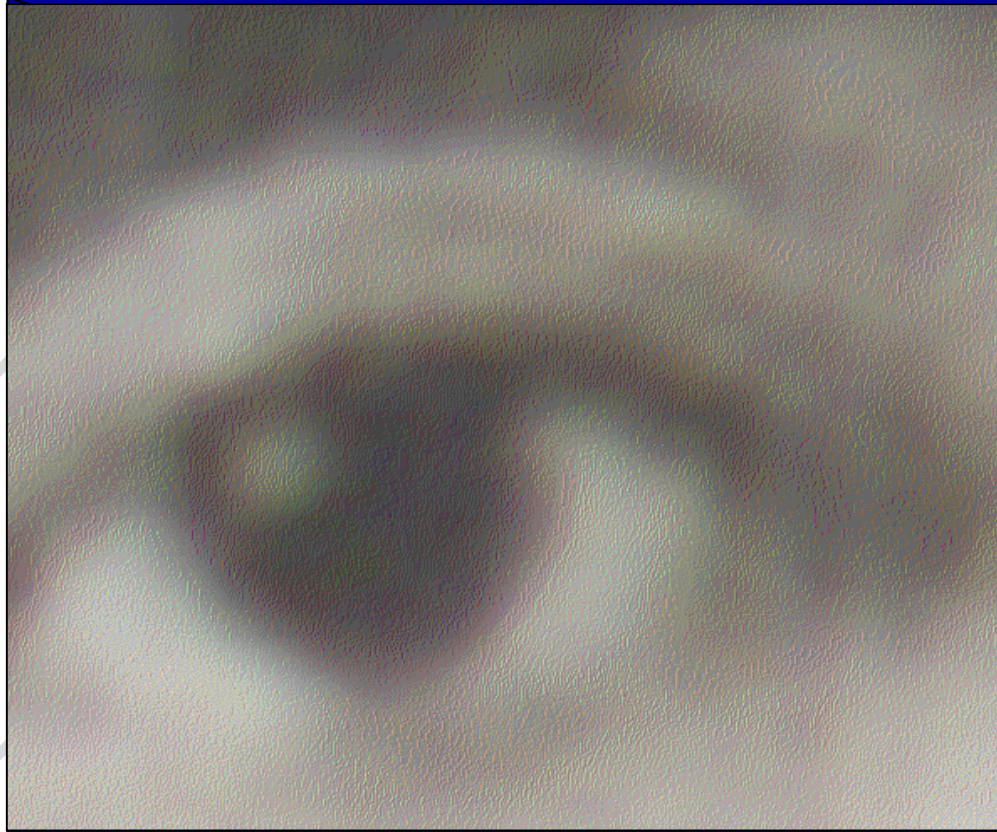
## Laser-Effects



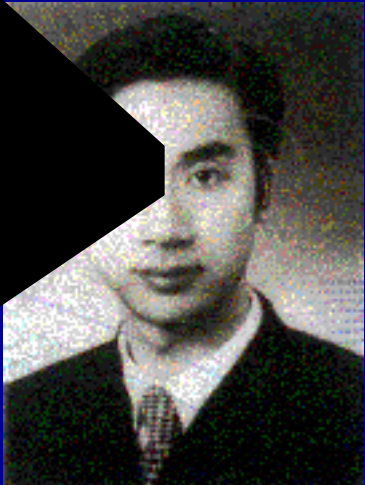
Confidential © 2005 Trüb AG Switzerland

# Personalisation of Polycarbonate Documents

## High-Resolution Imaging



- Real grey level continuous tone
- High resolution





# Polycarbonate project examples



- Hong Kong ID
- ID of Bosnia and Hercegovina

# Polycarbonate Document example

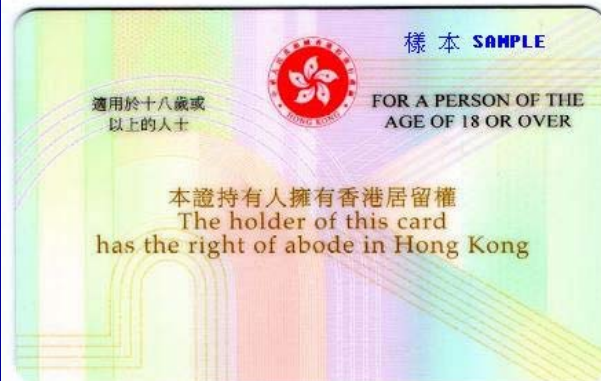
## Hong Kong ID



- Polycarbonate
- ID 1 Format
- High quality laser-engraving
- Integration of vast security features
- Integration of Crypto Chip  
32Kbyte EEPROM
- MULTOS Level E5
- Multi application for users and  
immigration authorities

# Polycarbonate Document example

## Hong Kong ID



- High tamper resistance
- Long lifetime
- Multi-functionality
- PKI
- E-Government applications
- Automatic matching and processing for border crossing
- Electronic Driving License
- Library functionality







# Summary

# Polycarbonate Documents

## *Summary*



- Strong Intl. trend to application with Polycarbonate documents
- Laser engraving is a important personalisation standard
- Easy integration within today governmental infrastructure
- No IP rights apply
- Reliable and counterfeit proofed solutions in the market
- ID-1 (ID) and ID-3 (Passport) Formats



**Günther Heeb**  
Head of Business Development

Trüb AG  
Hintere Bahnhofstrasse 12  
CH-5001 Aarau (Switzerland)

Phone: +41 62 832 00 25  
GSM: +41 79 508 39 86  
E-mail: [guenther.heeb@trueb.ch](mailto:guenther.heeb@trueb.ch)  
Web: [www.trueb.com](http://www.trueb.com)