



Addressing the worldwide biometric enrolment challenge

Guidance without words

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Agenda



Norway biometric enrolment project

Passports, visas and other identity documents

Biometric Enrolment Software

Face

Fingerprint

Signature

Physical Issues

Additional Deployments

Norway

Biometric Enrolment Solution



Client

The National Police Computing and Materials Service and the Ministry of Foreign Affairs

Project

1 software solution for the capture of biometric data (facial, fingerprint and signature) for e-passports, travel documents and visas

3 hardware solutions

- **Kiosk**
- **Desktop**
- **Portable Solution**





Locations (Phase 1 now deployed)

Stockholm
Kiev
Oslo
London



Full Deployment by March 2009

- 480 Kiosks
- > 120 Consular Posts
- > 100 National Passport Application Offices

Cairo

Nairobi

Environment



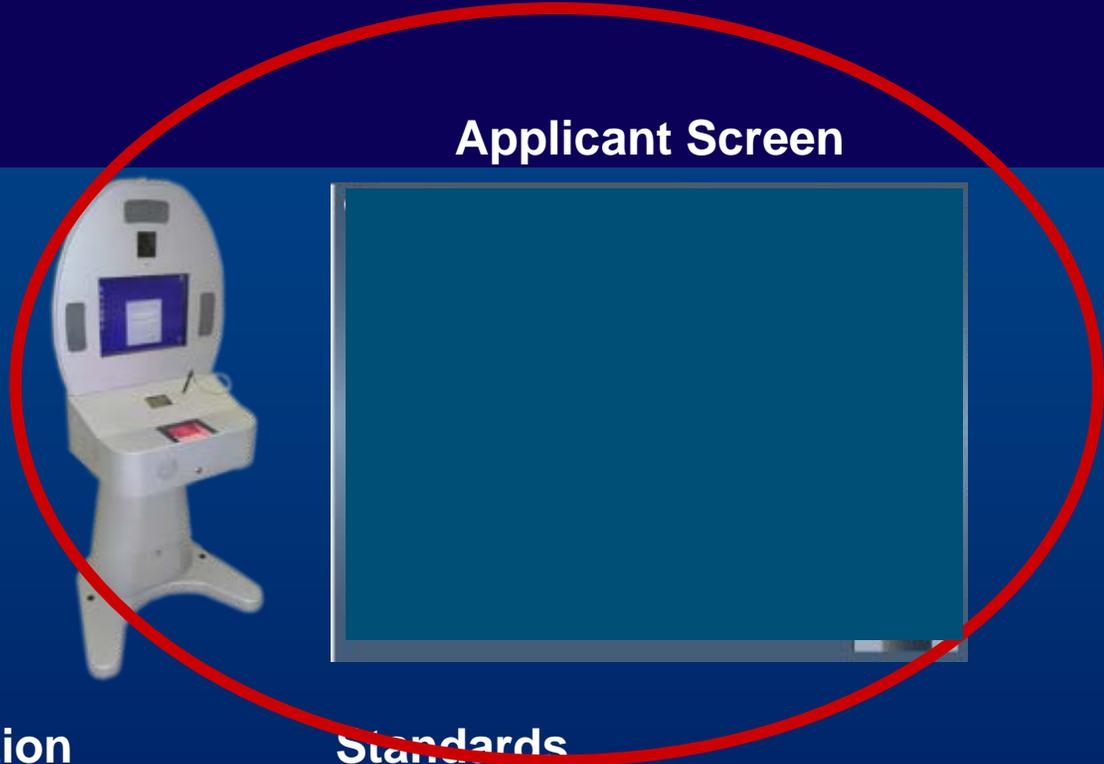
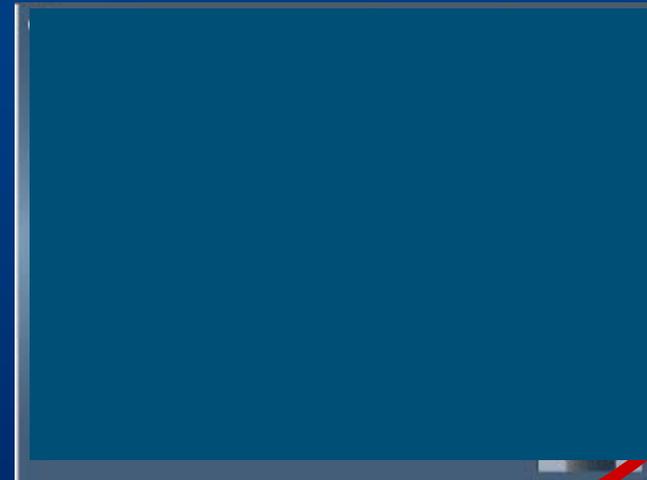
Norway Solution



Operator Screen



Applicant Screen



Software for Enrolment Solution

- 4-4-2 fingerprint scanning
- 2D camera
- Signature pad
- Interfaces to existing Norwegian passport, visa and immigration systems
- <3 minutes for total enrolment

Standards

- ISO/IEC 19794-4
- ICAO compliance

Biometric Enrolment Software



Guidance for Applicants

Facial Image Capture
Fingerprint
Signature

all
2 flats or 10 flats or none
depends on age

Facial Image Capture ICAO Guidelines



Glasses and Head covering

Portrait Quality



Style and Lighting



Expression and Frame





Facial Image Capture

Guidance Analysis

Portrait Quality	X	Installation Environment Guidelines Operator Controlled
Style		No hair obscuring the eyes Facing square to the camera Head should be upright
Lighting	X	Installation Environment Guidelines Operator Controlled
Glasses	X	Installation Environment Guidelines Operator Controlled
Head Covering	X	Installation Environment Guidelines Operator Controlled
Expression		Look at the camera with a neutral expression and the mouth closed
Frame	X	Operator Controlled

Facial Image Capture Guidance

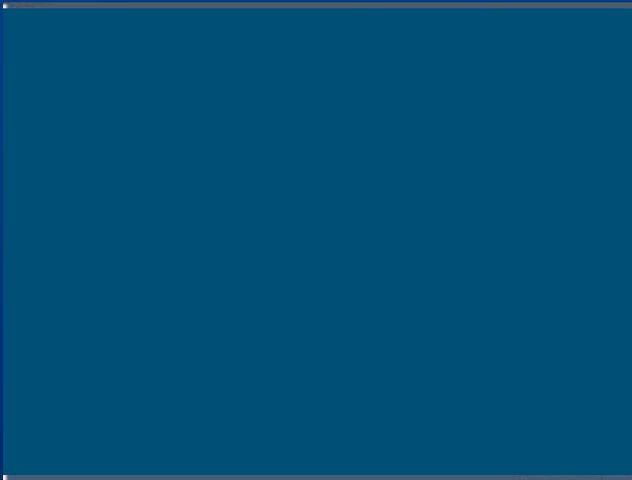




Facial Image Capture

Overall Approach

Applicant Screen



- Animated pictorial instruction**
- Flashing indicator to capture attention on kiosk**
- No language**

Operator Screen



- Image view**
- Image alignment grid**
- Quality assessment**
- Optional detailed report**
- Management tools**
- Show image to applicant**

Fingerprint Capture

Guidance : cleaning fingerprint platen



Fingerprint Capture

Guidance : left hand



Fingerprint Capture

Guidance : Thumbs

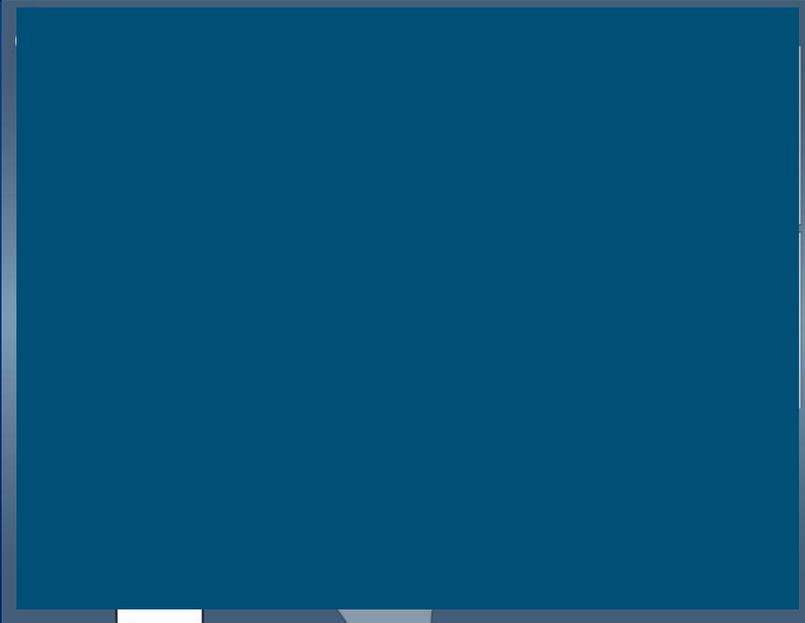


Fingerprint Capture

Overall Approach (1)



Applicant Screen



Animated instructions
Live capture preview

Operator Screen

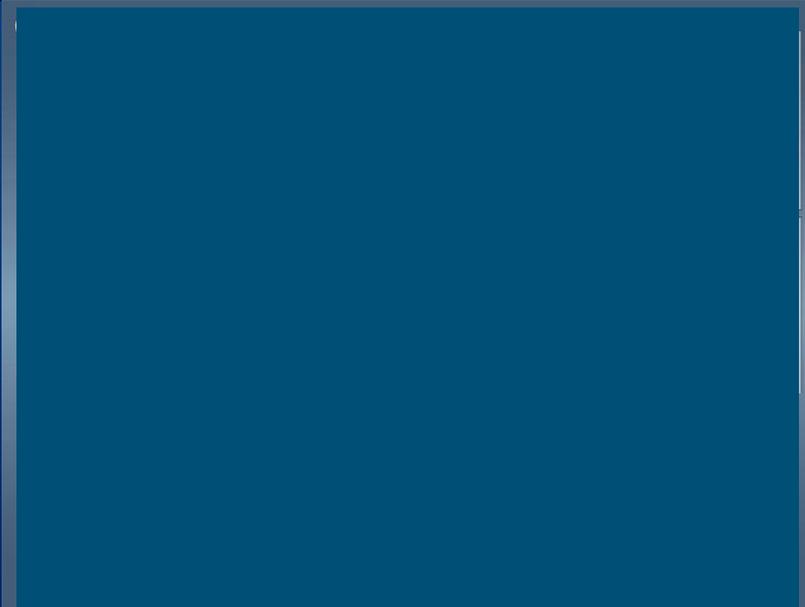


Yellow = hand/fingers being captured
Green box = good quality
Red box = poor quality

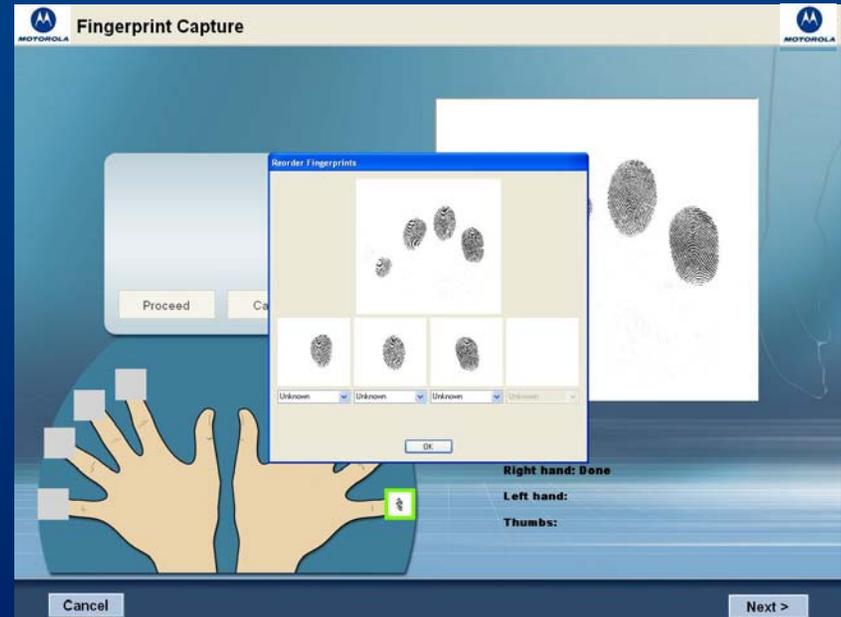
Fingerprint Capture Overall Approach (2)



Applicant Screen



Operator Screen



Provides ability to specify
amputated, missing, etc

Signature Capture Guidance



Summary



Operator Screen



Shows information captured through process

Same screen for Operator and Applicant

Optional display to Applicant

Physical Issues



Biometric Enrolment



Additional Projects



BIODEV II



European Commission

Pilot Project of a Complete Border Solution

involving Biometric Enrolment, Central AFIS, Biometric Verification

Motorola Implementation	Host Country	Consular Posts	Border Posts	Central System
√	Austria	Tirana (Albania)	Vienna Airport	Vienna
	Belgium	Bujumbura (Kigali) Kigali (Rwanda)	Brussels Airport	Brussels
	France	Fez (Morocco)	Sète Nice Airport	Paris
	Germany	Ulan Bator (Mongolia)	Schoenefeld (Berlin) Tegel (Berlin)	Cologne
√	Luxemburg	London (UK)	Luxembourg Airport	Luxembourg
√	Portugal	Dakar (Senegal)	Lisbon Airport	Lisbon
√	Spain	Tetuan (Morocco)	Madrid Airport	Madrid
√	UK	Freetown (Sierra Leone)	Gatwick Airport	London

CSC

Enrolment of Visitor Information





Finger

Face

Iris



Thank You
Questions ?