

OPTICAL AND DIGITAL DOCUMENT SECURITY IN THE AFRICAN CONTEXT

Ilja Hofmann

OVD Kinegram AG, Switzerland

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OVD Kinegram AG | Member of the KURZ Group
Zaehlerweg 11 | CH-6301 Zug | Switzerland
Phone: +41 41 724 49 00 | Fax +41 41 724 49 11
mail@kinegram.com | www.kinegram.com

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What is an optical security feature?

“Protects against unauthorized reproduction, alteration and other forms of tampering” (ICAO)

“Helps to insure the documents integrity and/or authenticity as a properly issued document that has not been tempered with” (ISO/IEC)

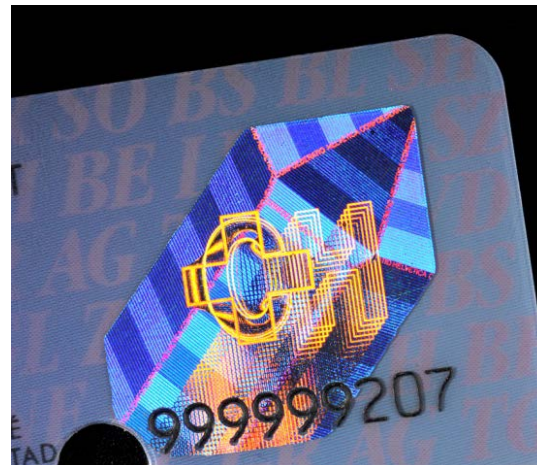
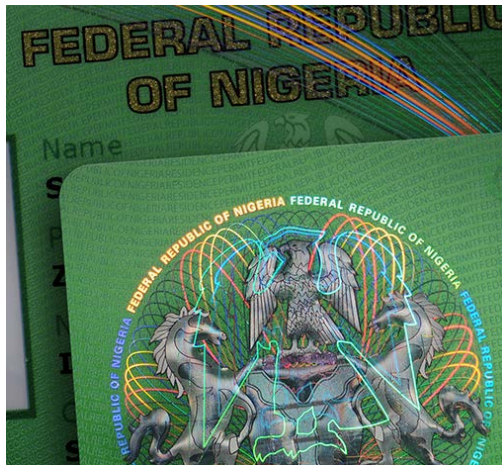


Key requirements for a high security feature

Technology for governments only

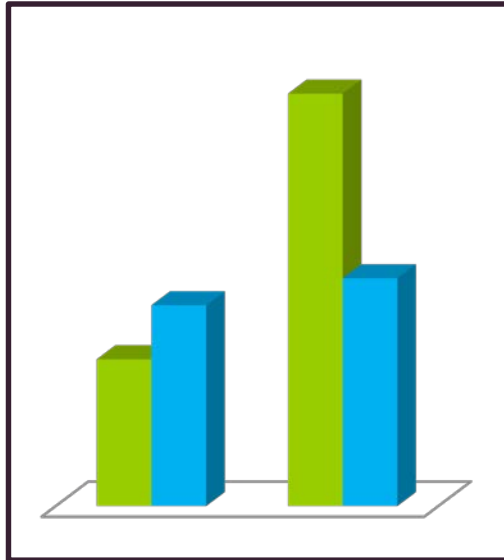
1. Easy to communicate
2. Easy to verify
3. Hard to copy or imitate

1. By simple means
2. Verification tools
3. Forensics



The African context

Demographics



Lacking
infrastructure

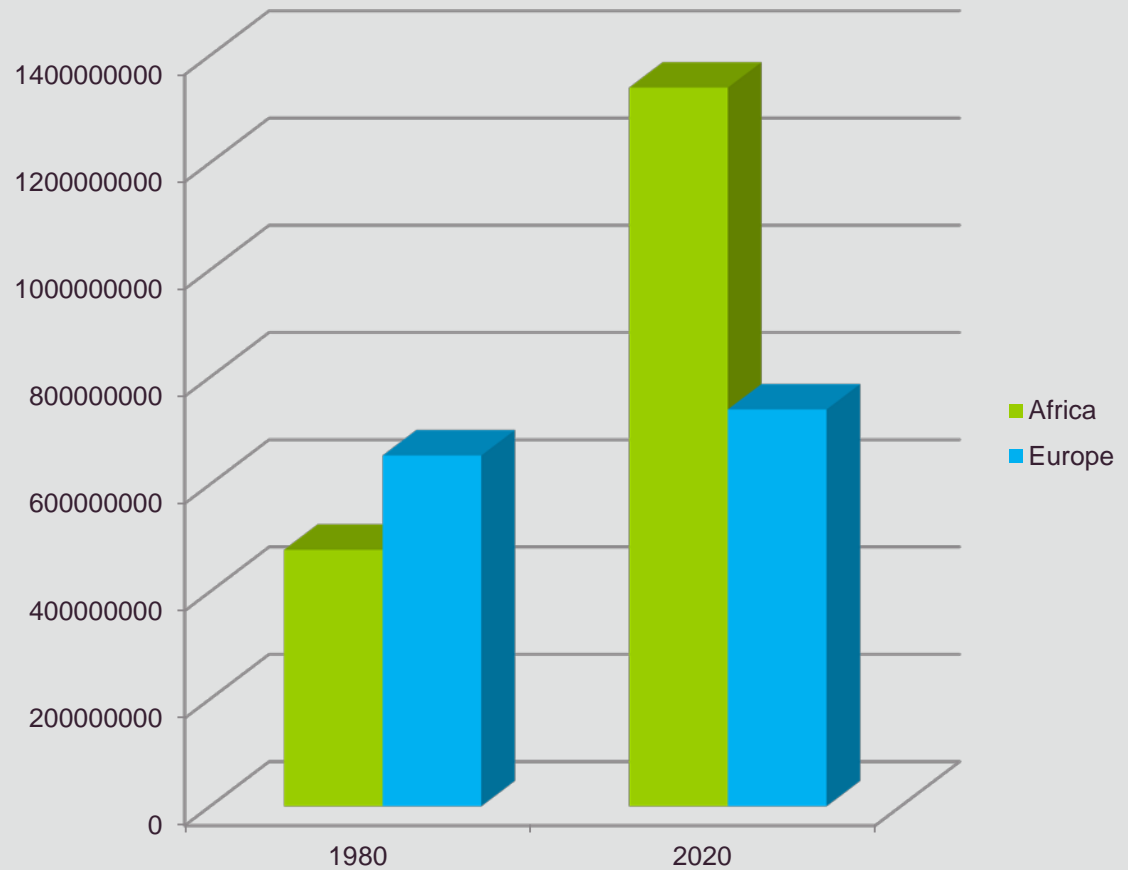


Costs



Challenges

- Demographics
- Lacking infrastructure
- Costs



	Africa	Europe
1980	477'965'000	653'859'000
2020	1'340'000'000	739'725'000

Challenges

- Demographics
- Lacking infrastructure
- Costs

More documents have to be issued

More migration

More travel activity

More fakes

- High security solutions
- Integration of the national identity

Challenges

- Demographics
- **Lacking infrastructure**
- Costs



Challenges

- Demographics
- Lacking infrastructure
- Costs

Permeable land borders

Lack of equipment

Lack of training

- Solution should be easy to verify
- Digital verification by smartphone
- Design communication by smartphone

Challenges

- Demographics
- Lacking infrastructure
- Costs



Challenges

- Demographics
- Lacking infrastructure
- Costs

Budgetary restrictions

- Flexible solution (hardware independent)
- Easy implementation
- Easy to upgrade

Challenges

- Demographics
- Lacking infrastructure
- Costs



HIGH SECURITY TECHNOLOGY



OPTICAL & DIGITAL VERIFICATION



COST EFFECTIVENESS

HIGH SECURITY AND RESTRICTED TECHNOLOGIES

High definition metallization



Zero tolerance partial metallization
(European Visa)

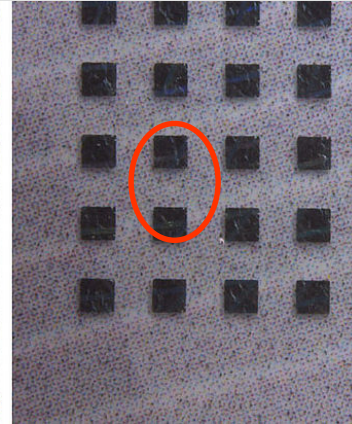
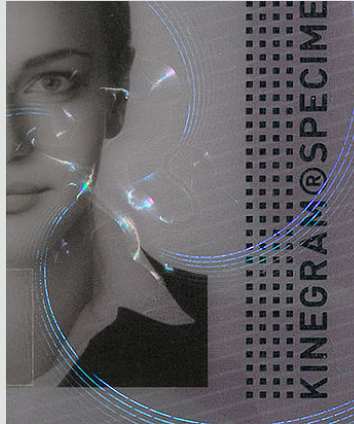


High definition metallization

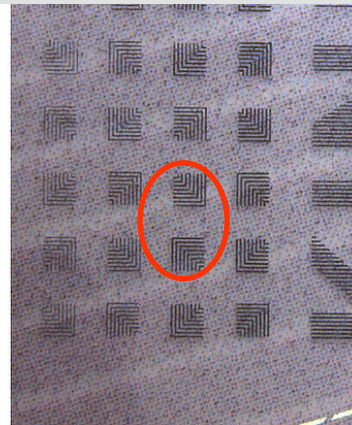
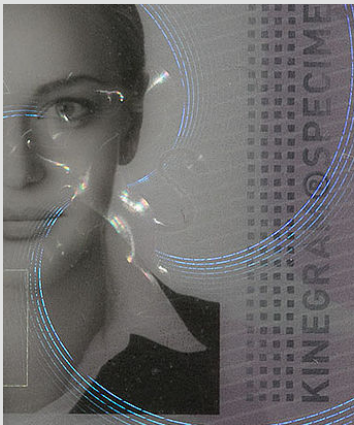
- Extreme resolution:
10 times higher than
conventional metallization

conventional = 100μ
HDM = 10μ

- 2nd and 3rd level security
features (not commercially
available)



conventional metallization
Lines = 100μ



HDM
High Definition Metallization
Lines = 10μ

Pia Angela
SAMPLE

OVD KINEGRAM AG

SPECIMEN

CH



INTERGRAF

SECURITY PRINTERS · DUBLIN IRELAND · 21-23 MARCH 2018

Pia Angela
SAMPLE

OVD KINEGRAM AG

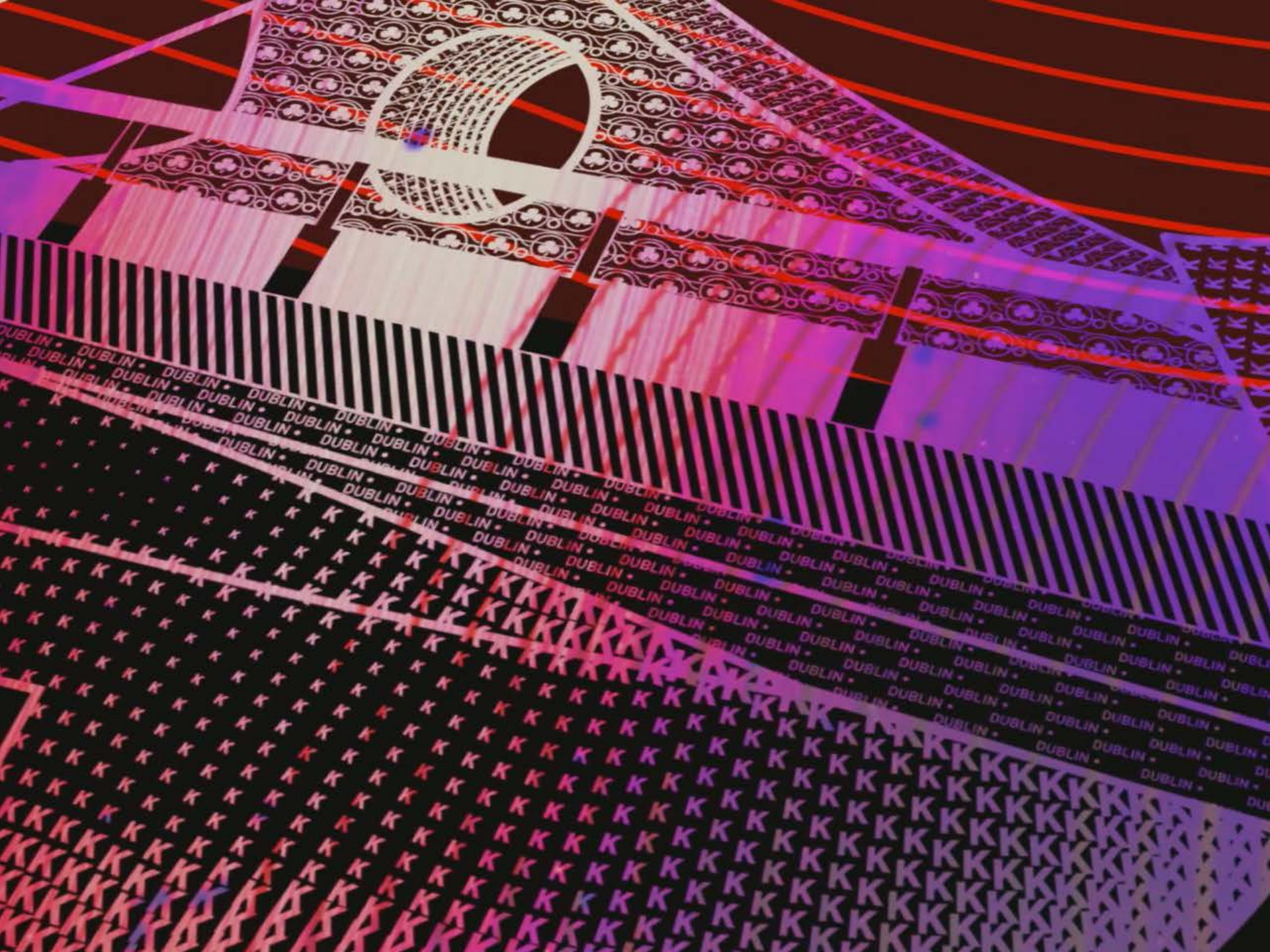
SPECIMEN

CH



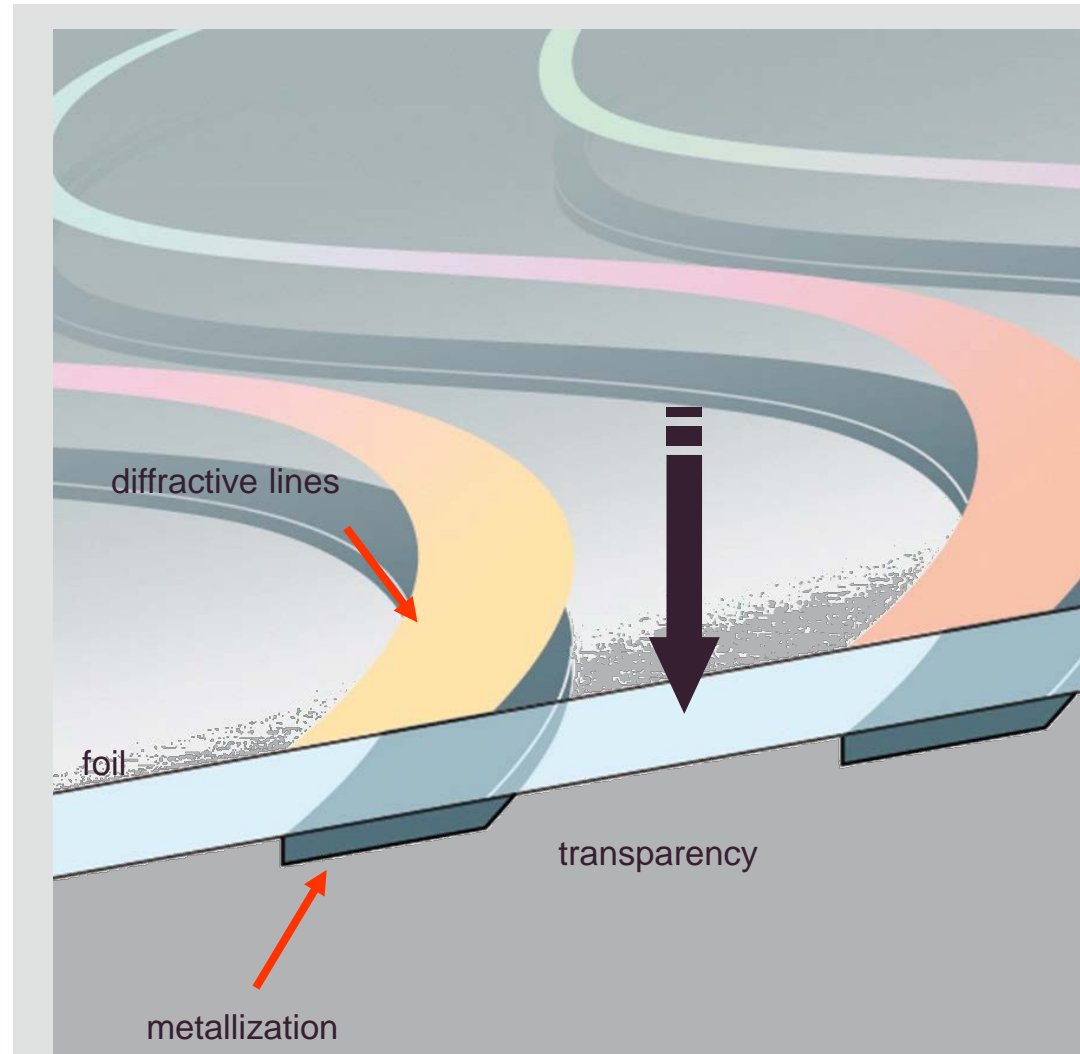
INTERGRAF

SECURITY PRINTERS · DUBLIN IRELAND · 21-23 MARCH 2018



Zero tolerance partial metallization

- Unique high-precision partial metallization technology without tolerance issues
- Maximum brilliance combined with a predetermined transparency
- The ideal technology for the integration of a design with security print



IDENTITY CARD

REPUBLIC OF UTOPIA

SPECIMEN

KINEGRAM® SAMPLE ID CARD



surname

SAMPLE

ID N°

A51284970

sex

F

given names

PIA ANGELA

date of birth

25 JUL 1981

date of issue/expiry

18 JUN 2010

17 JUN 2020

IDENTITY CARD

REPUBLIC OF UTOPIA

SPECIMEN

KINEGRAM® SAMPLE ID CARD



surname
SAMPLE

ID N°
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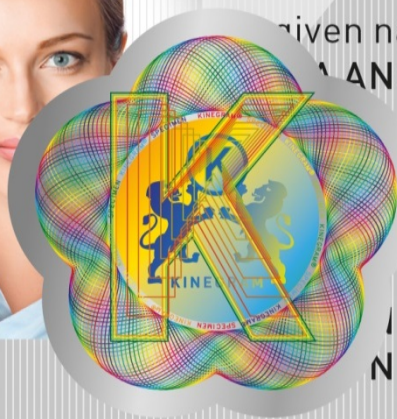
ID N°
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sex
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given names
ANGELA

irth
981

issue/expiry
2010
N 2020



IDENTITY CARD

REPUBLIC OF UTOPIA

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17 JUN 2020



FEDERAL REPUBLIC OF NIGERIA

Name

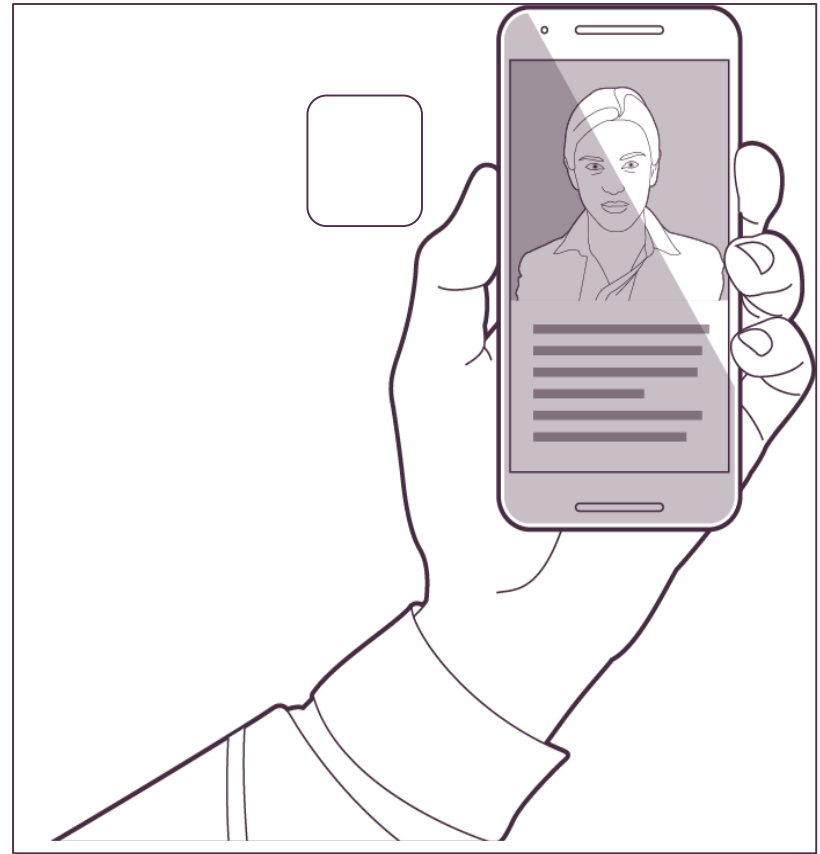
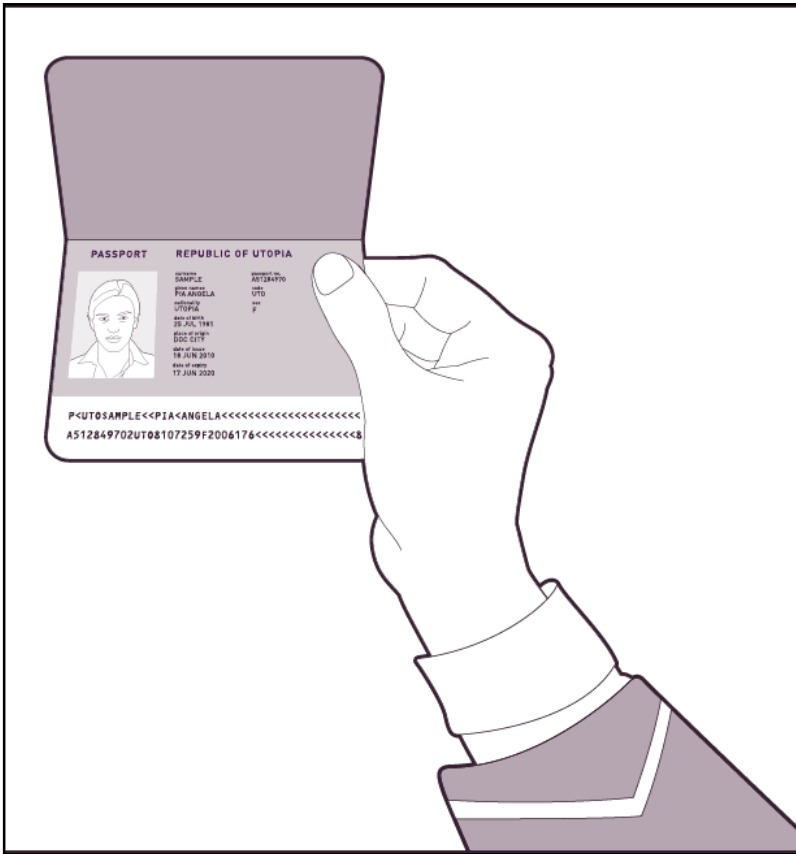


FOR
NIGERIA

CERPAC

Date Of

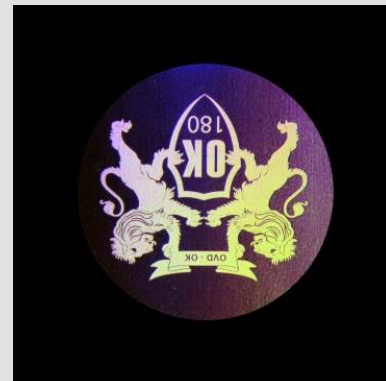
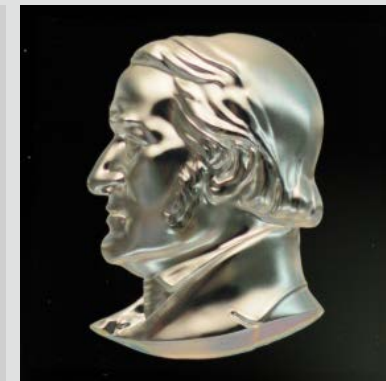
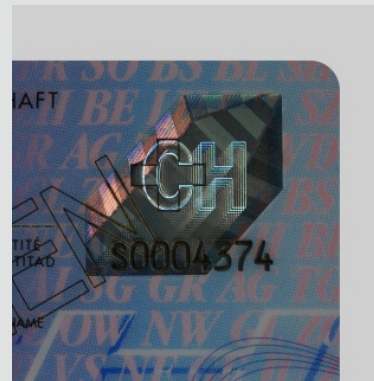
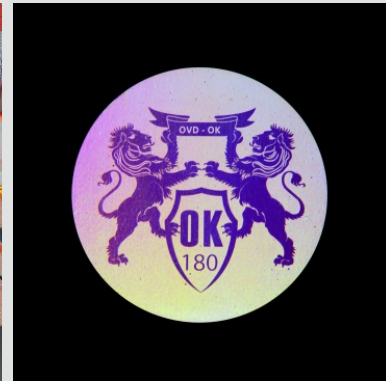
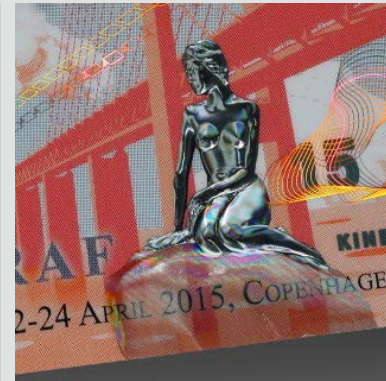
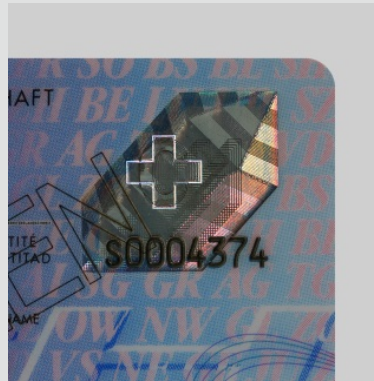
EASE OF VERIFICATION

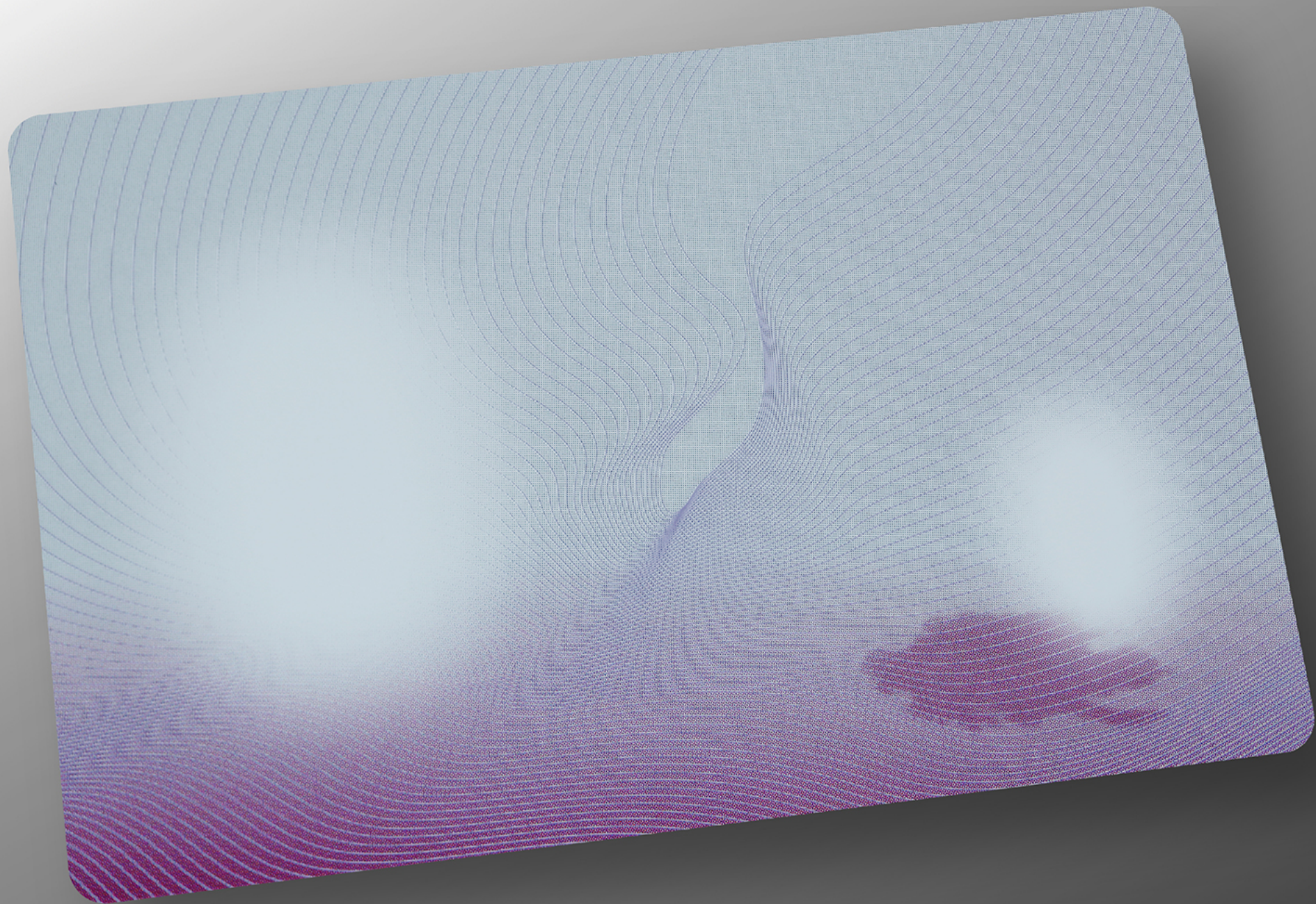


OPTICAL VERIFICATION

Security feature selection:

- Fine-line transformations
- Virtual 3D effects (Surface Relief)
- Contrast flip about 180° (non holographic feature)





A51284970



surname
SAMPLE

given names
PIA ANGELA

date of birth
25 JUL 1981

date of issue/expiry
18 JUN 2010
17 JUN 2020

ID N°
A51284970

sex
F



P. Sample

REPUBLIC OF UTOPIA

1284970



surname
SAMPLE

given names
PIA ANGELA

date of birth
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17 JUN 2020

ID N°
A51284970

sex
F



P. Sample

DIGITAL VERIFICATION

- Scanning QR-code
- Verifying chip data by NFC
- Verifying optical features
- Design communication

KINEGRAM DIGITAL SEAL
free of charge



COST EFFECTIVE

Easy Upgrade



Flexibility



Easy upgrade

Retain issuing processes and equipment but...

...upgrade the security foil

- include new metallization technology
- add innovative optical effects

Step-by-step upgrades of the European Visa since 1993



Flexibility

- Works on all machines
- Works on all supports
- Works on all substrates:
 - Paper
 - PVC
 - PC
 - Composite
 - Teslin



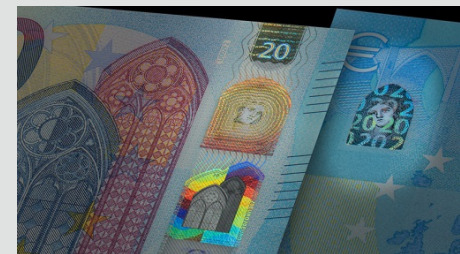
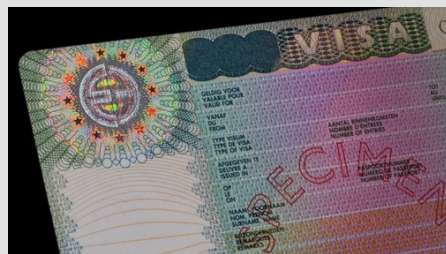
**THERE ARE TECHNICAL
SOLUTIONS TO YOUR
CHALLENGES**

ACHIEVE MORE WITH LESS

THERE ARE TECHNICAL
SOLUTIONS TO YOUR
CHALLENGES

ACHIEVE MORE WITH LESS

500 KINEGRAM projects in 110 countries



A close-up photograph of a person's hands holding a red Swiss passport. The passport cover features the text "Passaporto svizzero", "Passaport suisse", and "Swiss passport" along with a white cross symbol. A semi-transparent purple oval is overlaid on the center of the passport.

Thank
you

KINEGRAM®