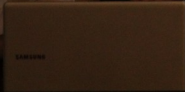




**FROM A GARAGE LAB TO A WORLD LEADER IN
SECURITY HOLOGRAMS**

The story of Hologram. Industries

H O L O G R A M  I N D U S T R I E S





HOLOGRAM. INDUSTRIES

OPTICAL SCIENCE

CHEMICAL SCIENCE

EXCELLENCE IN PRODUCTION

HOLOGRAM  INDUSTRIES



THE EARLY DAYS

Denis Lachaud

Hugues Souparis

H O L O G R A M  I N D U S T R I E S

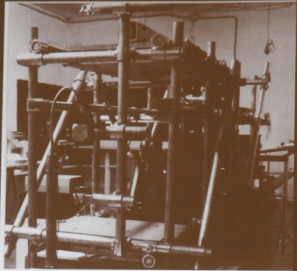




1984 : a « Multiplex » printer

Making 360° integral stereogram on Lyod Cross principle

H O L O G R A M ■ I N D U S T R I E S



« UNPROBABLE » EQUIPEMENT -BEAUTIFUL RESULTS

HOLOGRAM ■ INDUSTRIES



MULTIPLEX INSTALLATIONS AND FUN IMAGES

Happy Holographers (1984)

- 180° animated image
- Camera shot

François Mitterrand & Holophone (1985)

- Rotative 360°
- "Talking" hologram



1986: THE FIRST LAB (AFTER THE GARAGE)

Paris Suburb

- 200 M2
- 5 watt laser



MULTIPLEX INSTALLATIONS AND FUN IMAGES

City of science (1986)

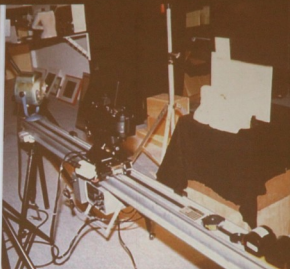
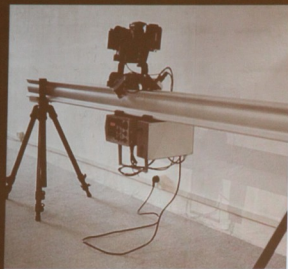
- 50cm Diameter
- Rotative 360°
- Computer image

King of Thailand (1986)

- 60x80 cm
- Traditional Rainbow
- From model

Night Club(1987)

- Series of 180° animated images



THE HOLOSCOPE

H O L O G R A M  I N D U S T R I E S



ADVERTISE IMAGERY

Stereogram

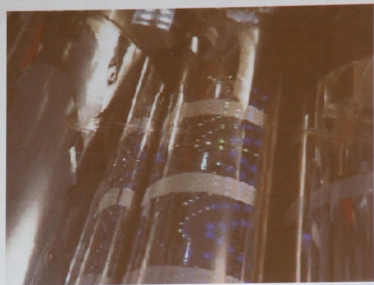
- 2 colors rainbow stereogram
- From plexiglass model and flat graphics

HOLOGRAM  INDUSTRIES



UP TO 1sqM TEROGRAM COMMERCIAL WORK

End of 80's



GOING INTO EMBOSS HOLOGRAMS

H O L O G R A M ■ I N D U S T R I E S



MAGAZINE COVERS, PROMOTION GADGETS

Key Chain 1988

Caractere magazine

Impact Medecin

H O L O G R A M  I N D U S T R I E S



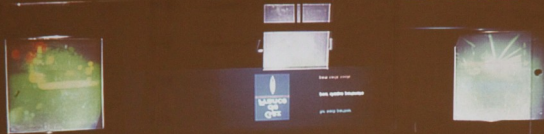
COLLABORATION WITH ARTISTS

Hariett Casdin Silver

- Venus

Claude Chabrol

- DR M
- Black and white stereogram



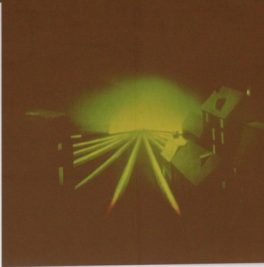
A LAST PROJECT IN DISPLAY HOLOGRAPHY AND CRASH

Seville 92 World fair

... and no more display business

- 4 sqm holograms
- 1 60x80
- Combined with video projection

HOLOGRAM ■ INDUSTRIES



A LAST PROJECT IN DISPLAY HOLOGRAPHY AND CRASH

Seville 92 World fair

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- 4 sqm holograms
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HOLOGRAM  INDUSTRIES



STEPPING IN SECURITY

H O L O G R A M . I N D U S T R I E S



SPECIALIZATION IN BRAND PROTECTION AND DOCUMENTS

Growing amount of projects in the 90's

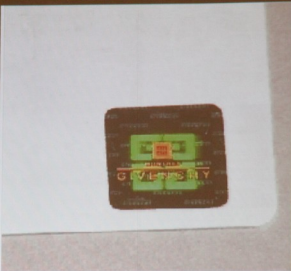


SPECIALIZATION IN BRAND PROTECTION AND DOCUMENTS

Cartier Certificate

Credit Card

H O L O G R A M ■ I N D U S T R I E S



SPECIALIZATION IN BRAND PROTECTION AND DOCUMENTS

Growing amount of projects in the 90's



HOLOCIS®

Registration Certificate

Carplate Label

Windscreen Label

- One of the first « system » built around security holograms
- Still in use after 15 years

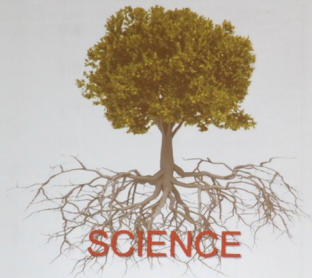
HOLOGRAM ■ INDUSTRIES



EURO

1998: Origination of 50, 100, 200 & 500€

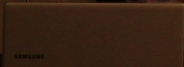
H O L O G R A M  I N D U S T R I E S



SCIENCE

FROM 2000's, DEEPER INVESTMENT IN SCIENCE

H O L O G R A M ■ I N D U S T R I E S





SECURITY = SIMPLICITY & ROBUSTNESS

EASY TO CONTROL

- Dramatic visual effect

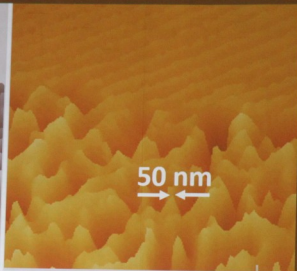
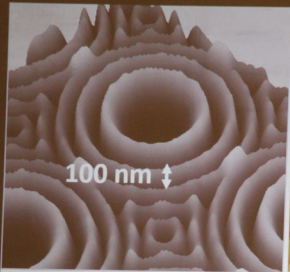
SIMPLE TO EXPLAIN

- Easy to memorize

ROBUST

- Deep scientific roots

H O L O G R A M ■ I N D U S T R I E S



NANO-TECHNOLOGIES

NANOSTRUCTURES OPEN A NEW AVENUE FOR OPTICAL SECURITY

- Designing and engineering optical nano-structures
- Engraving
- Reproducing on industrial scale



DID® : THE PIONEER NANO-TECHNOLOGIE IN OVD's

On passports

- First passport in 2003
- First ID card in 2006

On ID cards

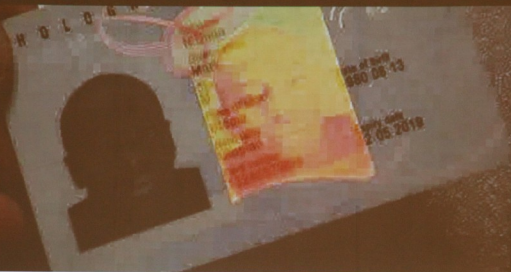
Opaque DID® PATCH



DID™ : FIRST BANKNOTE IN 2010

FIRST SECURITY FEATURE BASED ON OPTICAL NANO-STRUCTURES

H O L O G R A M ■ I N D U S T R I E S

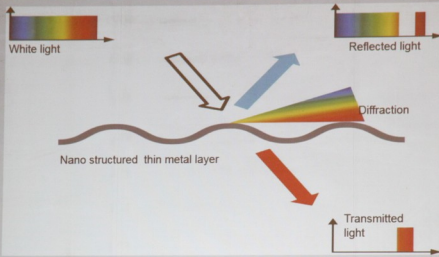


HoloID®

A unique application of volume holograms on photopolymers

- Individual hologram personalization
- Gunter Dausman and his team joined HI in 2006

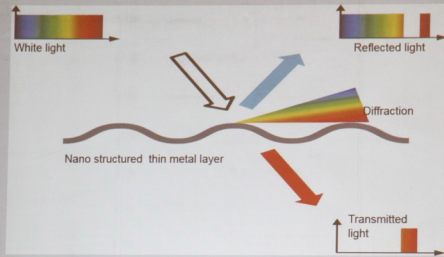
H O L O G R A M  I N D U S T R I E S



Plasmogram®

See through effect based on plasmonic phenomena

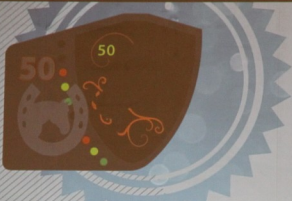
- One pure color transmitted
- One pastel color reflected



Plasmogram®

See through effect based on plasmonic phenomena

- One pure color transmitted
- One pastel color reflected



Reflection of deep pastel colors
combined with diffractive elements

PLASMOGRAM™

INTRODUCED IN 2014

- Designed for windows
- Reflective + See-Through effect
- Tested and Available for polymer substrates

H O L O G R A M ■ I N D U S T R I E S





Reflection of deep pastel colors
combined with diffractive elements

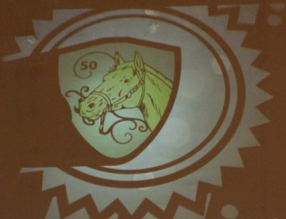
PLASMOGRAM™

INTRODUCED IN 2014

- Designed for windows
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- Tested and Available for polymer substrates



H O L O G R A M ■ I N D U S T R I E S



Transparent in light transmission
Two colors appear and permute when tilting the note

PLASMOGRAM™



INTRODUCED IN 2014

- Designed for windows
- Reflective + See-Through effect
- Tested and Available for polymer substrates

H O L O G R A M ■ I N D U S T R I E S



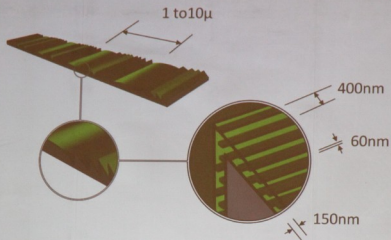
PLASMOGRAM™

INTRODUCED IN 2014

- Designed for windows
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H O L O G R A M  I N D U S T R I E S

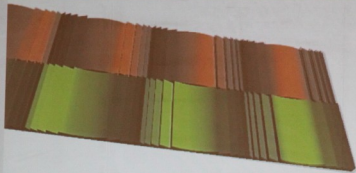




COMBINING DID® NANO-STRUCTURES & ULTRA-THIN LENSES

CHALLENGE : « MAPPING » DID™ ON ULTRA-THIN FRESNEL LENSES

- Developing the industrial process



ULTRA-THIN FRESNEL LENSES & NANO-TECHNOLOGIES

CREATING A HIGHLY SECURE SIMPLE VISUAL EFFECT

H O L O G R A M  I N D U S T R I E S

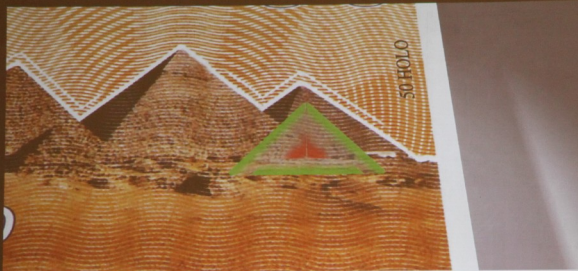


COMBINING DID™ WAVE THREAD AND PATCH

A UNIQUE VISUAL EXPERIENCE PROVIDED BY ADVANCED INTEGRATION

- High security substrate + high security printing
- Unique color permutation between thread and patch

H O L O G R A M  I N D U S T R I E S




DID™ WAVE DESIGN POTENTIAL

DESIGNING THE "WAVES"

- Transparent patch



MAPPING DID™ NANO-STRUCTURE ONTO COMPLEX FRESNEL LENSES DESIGNS

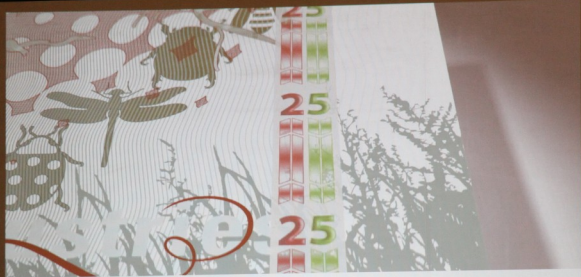
H O L O G R A M  I N D U S T R I E S



DID™VIRTUAL

3D "EMBOSSING" EFFECTS COMBINED WITH COLOR PERMUTATION

H O L O G R A M ■ I N D U S T R I E S

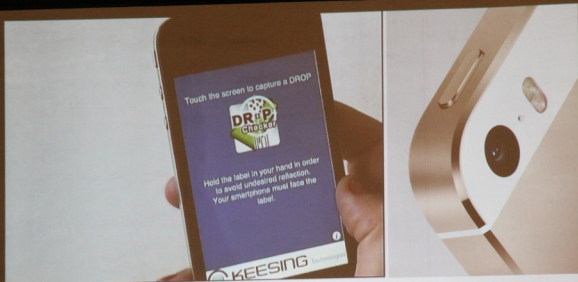


DID™ WAVE + DID™ VIRTUAL

MOVEMENT-EMBOSSING EFFECT-COLOR PERMUTATION

- Transparent feature

H O L O G R A M  I N D U S T R I E S



CONNECTING OPTICAL SECURITY AND DIGITAL

Check your hologram with smartphone and connect

H O L O G R A M ■ I N D U S T R I E S

DROP™



CONNECTING OPTICAL SECURITY AND DIGITAL

Check your hologram with smartphone and connect

H O L O G R A M  I N D U S T R I E S



CONCLUSION

From hope of a new media to reality of new security technology

- The road of innovation is not straight
- We did not invent a new media, but we brought holography in each and every one pocket!

HOLOGRAM ■ INDUSTRIES