

DUTCH
HOLOGRAPHIC
LABORATORY B.V.



CAPTURING YOUR IMAGINATION

THE MAGIC
OF THE
THIRD
DIMENSION



ASEA: Client gift

OUR CUSTOMERS

Dutch Holographic Laboratory B.V. (DHL) delivers holograms worldwide. Our clients include AT&T, Motorola and MTV in the States, Dassault and Futuroscope in Frankrijk, Kerncentrale Doel and the Krediet-bank in Belgium and Bayer AG, Philip Morris, Citibank, European Patent Office, KKB-Bank and Siemens AG in Duitsland.

We have worked for many Dutch companies including Philips NV, AKZO, Bührmann-Tetterode, Hewlett Packard, Proost & Brandt, PTT, ASEA Brown Boveri, Staatsdrukkerij, DSM, VLISCO, House of the future, Smith-Kline, ASTRA Pharmaceuticals, and Kovertto-Holland.

We are happy to say many are repeat customers and most of sales come from word-of-mouth.

AKZO: Quality Award



MAGIC AT YOUR SERVICE!

DISPLAY HOLOGRAMS

Reflection and transmission holograms are a suitable medium for drawing attention in both small and large spaces and are available in formats up to 1m².

Quality Award
Eye Catcher
Point of Sale Displays
Client gifts
Incentive

HOLOGRAMS ON PRINTED MATTER

Printed matter
Packaging
Stickers
Security

TRANSMISSION HOLOGRAMS

With this DHL type of hologram, the lighting comes from behind the image, as the material is transparent. Transmission holograms show all the colors of the spectrum depending on the angle on which the hologram is viewed. For this reason they are called rainbow holograms, and are known for bright, rich color. The following standard formats are available: 20x25, 30x40, 50x60, and 100x80 cm.

DHL also makes architectural-scale holograms upon special request.

REFLECTION HOLOGRAMS

In reflection holograms the holographic picture is seen floating in space against a black background. A different picture can be included in the background if desired. This type of hologram is remarkably true to detail, creating an almost surreal image.

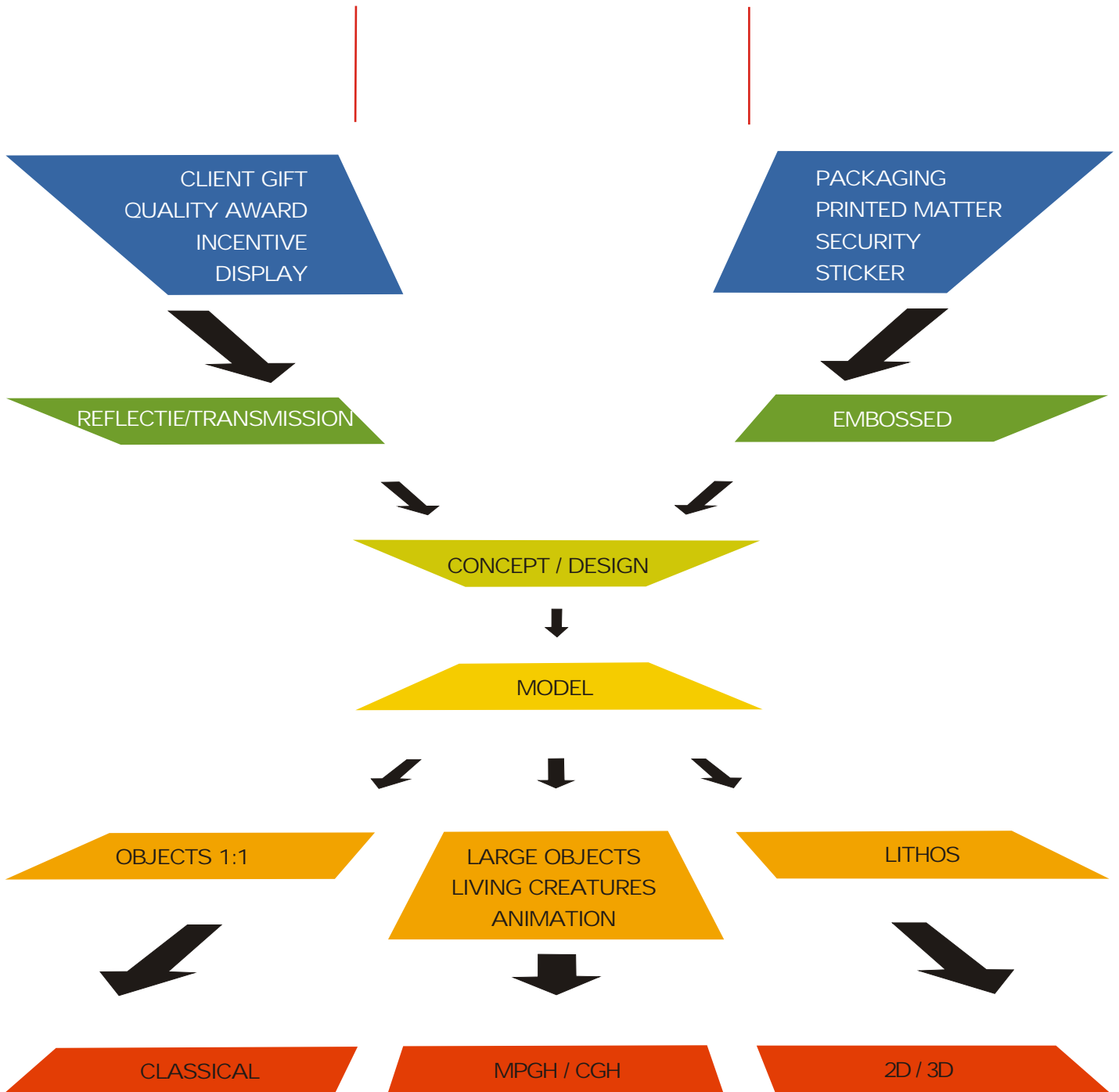
The color options are: red, orange, yellow and green. Multi-color holograms can be produced at additional cost. Available in standard formats 20x25, 30x40 and 50x60 cm. The holograms come matted and framed. They can be easily attached the DHL-designed halogen spot.

EMBOSSSED HOLOGRAMS

These are holographic pictures on special silver- or gold- colour foil, with the colours of the spectrum. This form of holography is perfect for printed matter. There are two options: hot-stamping onto printed matter and self-adhesive sticker.

DHL takes care of hot-stamping the holograms on the printed matter. The self-adhesive holograms are sticker-form and are delivered on rolls for easy machine application. The format and the shape of these holograms is flexible up to maximum dimensions of 15x15 cm

YOUR PARTNER FROM CONCEPT TO HOLOGRAM



| SOME EFFECTS | | TECHNIQUES | | |
|---------------|---------------------------|------------|------------|---------|
| | | CLASSIC | MPGH / CGH | 2D / 3D |
| POSSIBILITIES | 3D | * | * | |
| | FLIP / FLOP | * | * | * |
| | ANIMATION | | * | |
| | LENS | * | * | |
| | MONOCHROME ;-) REFLECTION | * | * | |
| | RAINBOW TRANSMISSION | * | * | * |
| | FULL COLOUR | * | * | |
| | PSEUDO COLOUR | * | * | * |

1) red, orange, yellow or green

WHICH TECHNIQUE ?



VLISCO: Eye catcher

CLASSICAL RECORDING 1:1

This recording possibility is extremely suitable for holograms of trademarks, logos, products and models, it is possible to process 2 or 3 pictures in a hologram. When looking at such a multi-channel hologram, different pictures are seen one after the other from left to right. We call this the Flip/Flop effect. The classical recording is made in the laboratory with laser light on a special table.

2D / 3D IMAGES

If you have a 2-dimensional picture, we can produce a so called 2D/3D-hologram for you. The hologram is recorded with different colour separated line lithos of the 2-dimensional picture. If you take a look at the hologram, you will see the depth-effect because the background is projected behind the surface of the image, giving parallax between foreground and background.

House of the future
(CGH)



MULTIPLE PHOTO GENERATED HOLOGRAPHY (MPGH)

With this new technique developed by DHL, it is possible to make an enlarged or reduced hologram of an object.

Even groups of people can be subjects of a hologram, and a bit of animation is also possible.

The recording can take place on location or in a photo studio. (see "Ricky Henderson")

The studio recording is combined into a hologram with the help of the Holoprinter developed by DHL.

COMPUTER GENERATED HOLOGRAPHY (CGH)

Instead of photo-shooting in a studio, we can generate computer animation pictures from a CAD-system, or use your 3D database as source material for the holoprinter. Now it is possible to make a hologram of a scene that does not yet exist. We use the 3D computer-design for producing the necessary rendered views on our Silicon-Graphics computer using Traces® Software

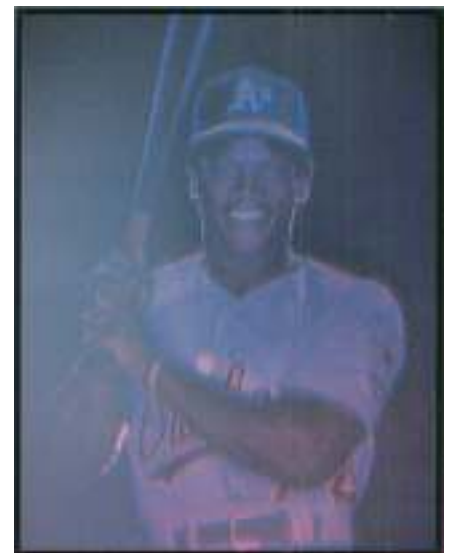


HEWLETT PACKARD: Dealeraction

INNOVATION

DHL has developed the MPGH recording methods and the Holoprinter® to process images for a hologram. Under development are a dotprinter and a desktop holoprinter®. The desktop holoprinter® is capable of printing holograms in your own office from your own 3D computer data. For this research DHL has received a grant from the Dutch Ministry of Economic affairs.

Ricky Henderson
(Full colour MPGH)



POSSIBLE APPLICATIONS

NOVA: Eye-catcher
(2D / 3D)



BAYER: Incentive

PHILIP MORRIS:
Incentive on matchbox
(3D)

