Excellence in Holography 2020 Awards

Best Origination & Best Display or Emerging Technology Application of Holography

DMC DeLorean CHIMERA™ (Ultimate Holography)

Who is the creative and production team?

Hologram Production: Yves Gentet and Philippe Gentet
3D model design: Didier Picard

Who was the hologram for?

3D artistic project

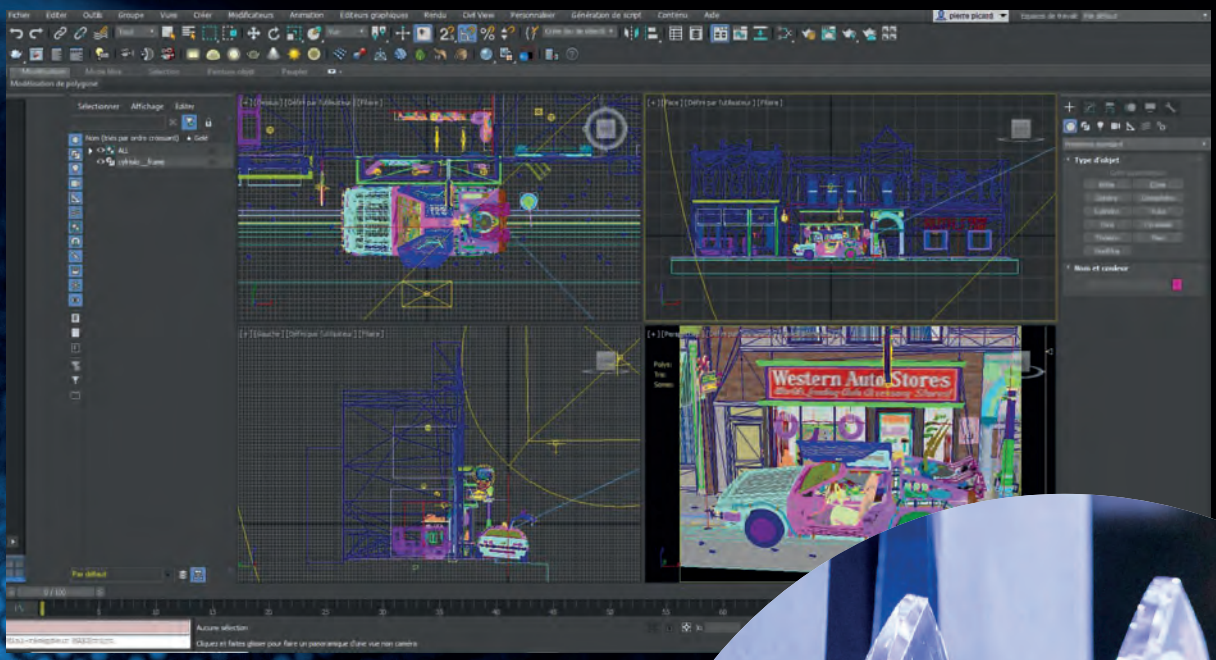
What was it for and how did it work?

The DMC DeLorean CHIMERA is a 40 by 30 centimeters 250 microns hogel 120-degrees full-parallax full-color CHIMERA from a computer-generated 3D model. The Artist requested a hyper-realistic image combining 3D, high resolution, and natural reflective and diffusive effects.

What is significant about this hologram project?

Digital holographic stereogram printing techniques have been actively developed since the end of the twentieth century to display virtual 3D scenes. Our new CHIMERA™ printer uses low power continuous RGB lasers with proper wavelengths 640, 532, and 457 nm, to reconstruct a perfect color balanced image. Furthermore, our Optical printing system generates a full-parallax image, with a 120° field of view in both vertical/horizontal directions and a hogel resolution of 250 µm (at this size, the human eye cannot see them). The use of our In House designed Holographic color material ULTIMATE™ guarantees a perfectly bright, noise-free, and colorful rendition.

The DMC DeLorean CHIMERA™ is a spectacular hologram demonstrating all the possibilities offered by our technology, that we control at each step: emulsion manufacture, plate/film coating, printer manufacture, printing facility, hologram design, and all processing.



Best Applied Decorative/ Packaging Product

Hazen Paper 2020 Calendar (Hazen Paper Company)

On whose behalf are you making this nomination?

Your own organisation

Who is the creative and production team?

Hazen Paper Company exclusive

Who was the hologram for?

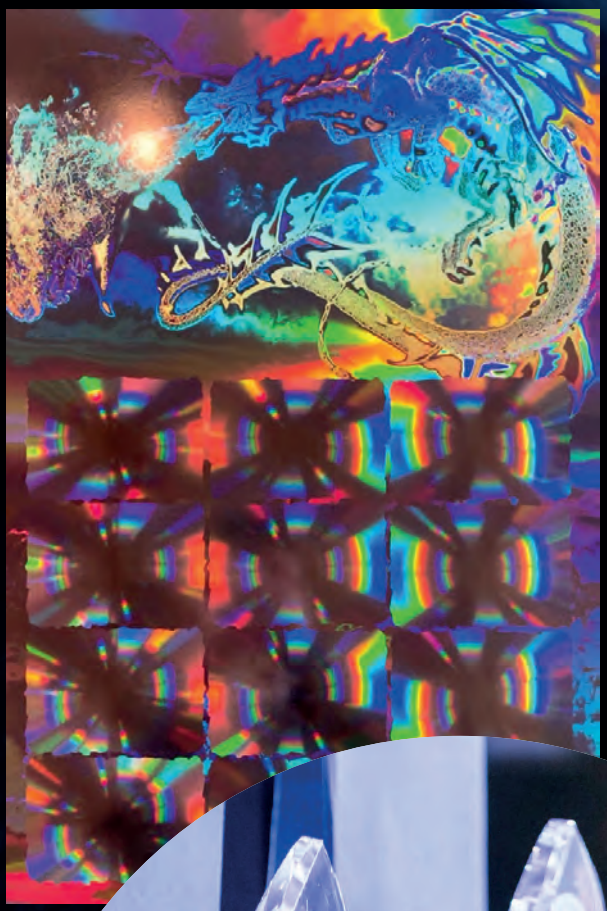
Hazen Paper Company

What was it for and how did it work?

This is the most popular calendar so far. Stay tuned for 2021!

What is significant about this hologram project?

Several holographic techniques were integrated for this calendar, included Hazen-Lens behind the dates/ months, Gray motion for the sky background, colour motion for the dragon's body and 2-Channel fire-lens and colour-motion lens for the fire.



Best Applied Security Product

Micromirror and Hologram LEAD Project (Louisenthal)

On whose behalf are you making this nomination?

Your own organisation

Who is the creative and production team?

Design: Kathrin Hovestadt, Mark Mittelstaedt Feature Effects: Christian Fuhse & Technical Team Product Manager: Christoph Gebauer

Who was the hologram for?

It is an extension to the foil portfolio generating a micromirror LEAD. It is also an element of a Hybrid ADDvance housenote series. This demonstrates the interface between Hologram and Micromirror technologies, and it gives our LEAD the bright and dynamic micromirror effects a colourful appearance.

What was it for and how did it work?

It was developed as a Housenote to demonstrate micromirror and hologram integration in the product portfolio. Through the design imperative, it demonstrates a perfect story-telling created with an intelligent combination of foil effects and the printed design. The beam of light of the lighthouse is visualized as a very luminous, bright and dynamic Starburst Effect on the foil – in both directions of the lighthouse.

Despite its reduced width of only 10mm, it is a surprising firework of features. On the right side of the foil, we can also see magnificent omnidirectional 3D effects on the cloud motifs that create the illusion of depth. In front of the clouds, seagulls are depicted with a vaulting effect, which only increases the impression of depth. Holograms break up the image on the foil and provide it with additional color effects. Even in low light, all highly luminous micromirror effects can be convincingly identified and make a considerably stronger integration into the banknote concept possible than exclusively holographic foils. The highly complex structural technology provides ideal protection against counterfeiting and is a market leader in the banknote field.

What is significant about this hologram project?

This is a complex combination of micro (Holo)- and macro(Mirror)-structures. This is significant in that it integrates a traditional hologram, with a micromirror feature incorporating dynamics and 3D. A technical challenge for origination, tool production, embossing an production of an modern and secure LEAD stipe. It is extremely difficult to counterfeit, and is quick and easy to authenticate, even in low light. It is also compatible with all banknote substrates.

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Innovation in Holographic Technology

TriSTAR™ Security Thread for Banknote (SURYS)

Who was the hologram for?

TriSTAR™ for thread is part of a new generation of security thread for banknotes, designed with disruptive technologies to strengthen the security of banknotes.

What was it for and how did it work?

TriSTAR™ technology combines traditional concept and state-of-the-art technologies to improve color changing within a thread. This solution facilitates the authentication of the banknote and its adoption by the public

Authentication can be conducted as follows:

Vertical color shift: when the TriSTAR™ thread is observed with an up and down movement, three reflective colors appears one by one, shifting from cold to warm colors and vice-versa.

Color change by rotation: when the TriSTAR™ thread is rotated from landscape to portrait view, the reflective color changes from a cold, to a warm color.

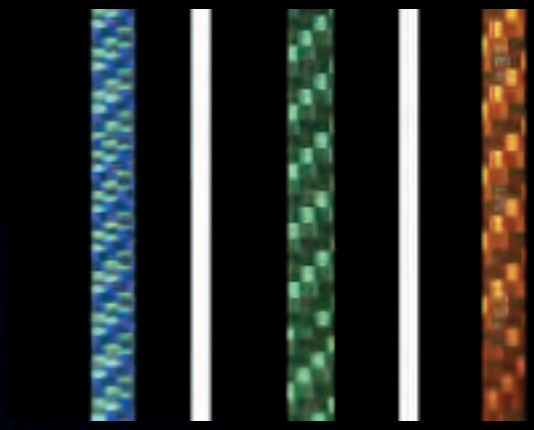
What is significant about this hologram project?

This next-generation solution for banknote thread links traditional concepts and breakthrough technologies, creating a striking security feature for banknote threads, easy to check and memorize.

The uniqueness of the solution lies in the dramatic colorshift showing three colors when the note is checked with an up and down movement. TriSTAR™ also reveals a color change when the note is rotated from landscape to portrait view.

This solution also stands out due to the great variety of effects included in the design for a complete customization such as: magnetic features, see-through micro-texts and UV fluorescence.

TriSTAR™ patented technology is optimized for 2 to 3 mm threads.



People's Choice

'Antarctica 200 3D' Security Stripe with 3D-Gram-C and High-Precision Micro-Demetallisation Technologies (JSC RPC KRYPTEN)

Who was the hologram for?

A sample banknote 'Antarctica 200 3D' with a new security stripe. It incorporates 3D-Gram-C two-color photopolymer security features and diffractive images with HPMD.

What is significant about this hologram project?

'Antarctica 200 3D' security stripe is a advanced combined feature which incorporates photopolymer holograms and demetallised images made with HPMD.

3D-GramTM Technology

The proprietary 3D-Gram™ technology displays visual effects different from traditional foil-based rainbow holograms. The key features of 3D-Gram™ security elements are highly prominent 3D images and color selectivity. 3D-Gram™ hologram keeps its original color at different viewing angles.

'Antarctica 200 3D' stripe exhibits a vibrant image of a whale and commemorative dates '1820' and '2020' in green color with a bas-relief effect visible in diffused and point light source.

Images of stars, inscription in Russian 'АНТАРКТИДА' and anniversary date '200' in red color display a mirror effect. Each number of the date includes an encrypted microtext 'FYNFHRNBLF' of 100 microns high.

3D-Gram hologram can incorporate a range of security features including bas-relief, full parallax, mirror effects, microtexts, flip-flop effect of colors and images.

Available in red, green, blue, light gold color and their combinations 3D-Gram™ holograms can be customized to a particular banknote design.

HPMD Technology

The photopolymer security features are complemented by diffractive elements demetallised with HPMD technology. The combination of the sophisticated technologies provides enhanced security of the stripe and guarantees its extreme resistance to imitation and counterfeiting.

Optical effects of photopolymer elements and precise images made by HPMD compose the unique stripe design. HPMD creates detailed images with vibrant dynamic effects. The stripe incorporates a composition of Antarctic mountains with color dynamic effect and an image of a compass decorated with guilloche lines featuring a dynamic effect. The compass displays holographic grey dynamic tone flow effect.