

Light

DIMENSIONS

The Exhibition of the Evolution of Holography

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EXHIBITION GUIDE

WELCOME TO LIGHT DIMENSIONS

When Denis Gabor invented Holography in England, back in 1947, few thought that it would eventually be regarded as important an invention as that of photography itself more than 100 years previously. Gabor coined the word holography from the Greek 'holos' meaning 'whole', and 'graphis' meaning 'image'.

Today at Light Dimensions we show you the fruits of his work as interpreted by the many people, both artists and scientists, who have followed in his footsteps. We take you through 5 different sections, each designed to explain and educate as well as entertain. By the end of your time with us, it is hoped you will have gained an insight into this fascinating new medium. This is a glimpse of our future world now. In years to come, we will think of holograms in the same easy way as we do photographs today. Light Dimensions presents the most comprehensive view of holography ever staged and is a landmark in this vital new technology.

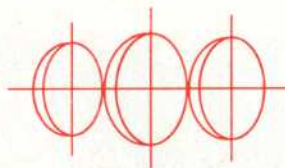


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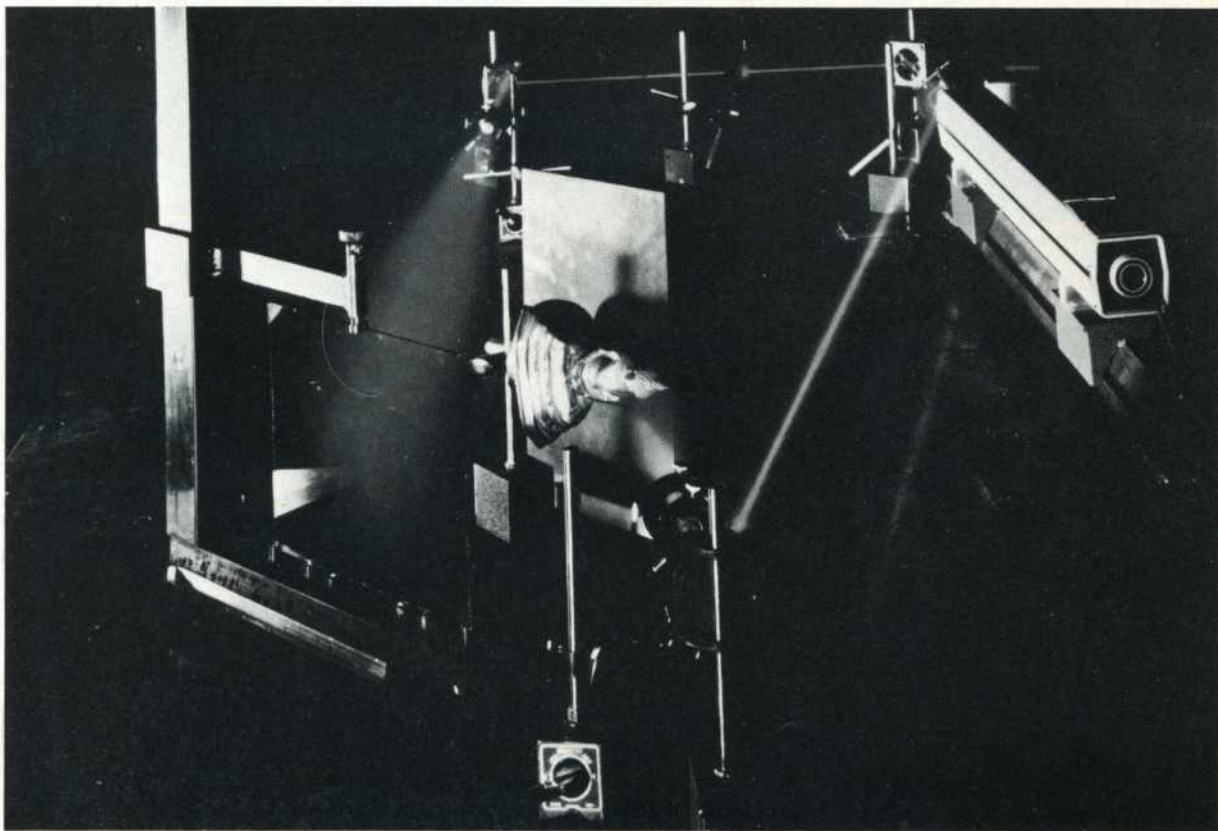
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SECTION 1 - HOW HOLOGRAMS ARE MADE

This section presents all the various types of holographic techniques presently available. By selecting the same image of sea shells to demonstrate the different techniques, we show you that the hologram maker has a variety of ways of presenting that same image. It can appear to hover in front of the plate or to be far behind on the other side. From this simple division you will be able to see the basic distinction in technique and the combinations which follow.

Here you can also see a 'mini' holographic set up which enables you to grasp some of the basics that are involved in making a hologram.



HOLOGRAPHIC SET UP

PHOTO: TIM HAWKINS

SECTION 2 - THE PIONEERS/HISTORY

In the exploration of new technology, with few exceptions, we are introduced to new concepts and have little or no idea how they were developed. The ordinary person has little chance of being able to understand any of the new techniques without having them put into a broader context. For this reason we show you some of the events along the path of holography's development in order that you can better appreciate the holograms on view in the exhibition. Hopefully you will realise the immense amount of work done by some exceptional people who have devoted themselves not just to finding out how things like light work, but who also share a tremendous sense of adventure and vision in an unknown territory. From the first small, dim laser transmission hologram onwards, you can see how these images gradually took the shapes that we will see in the Sections to come. The holograms we see today will change and mutate as techniques are improved and new methods are found. Just think, here is a unique opportunity to see the birth of a whole new way of seeing, just as our grandparents experienced the first photo, movie, radio and TV.

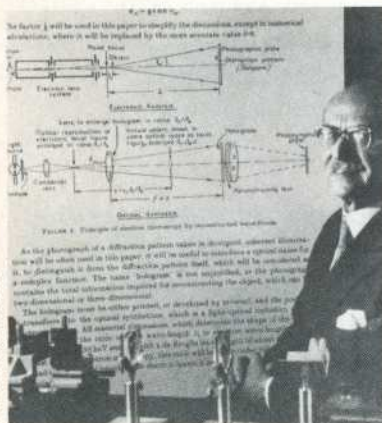


PHOTO: FRITZ GORO

MUSEUM OF HOLOGRAPHY N.Y.
PHOTO ARCHIVES

SECTION 3 - ARTWORKS

Artists started getting involved with the exploration of holography as early as the late 1960's. Seen in the wider context, there had been many movements in art related to technology and if we view art as a mirror to our society, then these works in a new medium should be of major importance. Still new to the art world holography is a revolutionary system with no point of reference from which to judge it. We are not looking at photographs or paintings but holograms. This Section is devoted to showing some of the very best work that has been created to date by some 34 artists from countries such as the U.S.A., Japan, Australia, Canada, Europe and the U.K. Never before has such a wide collection been presented under one roof, and is quite an eye opener.

Very few of the people who have created these holograms had any kind of scientific background prior to their involvement with holography. This shows that with patience and determination, anyone can do it. Most important is that these are works of the imagination, and they demonstrate that there are no limits to what one can do with holography.



PHOTO: STEVE BORNS

"THOUGHTS" BY KEN DUNKLEY

SECTION 4 - DAILY USES/APPLICATIONS



PHOTO: BRITISH TELECOM

BRITISH TELECOM CARDPHONE

Perhaps the most immediately pertinent of all the Sections, here we see the wide range of applications that holography already has, from medicine to aeronautics, from engineering to advertising, already holography has seeped into our daily lives often without our being aware. This is just the beginning, think of the years to come!

THE FUTURE NOW

Holography is already part of our lives with an increasing number of applications affecting the person in the street.

Did you know that when we:

- go to the supermarket, if the scanners at the checkout counter are made by IBM, they are based on a holographic disc which reads and interprets the codes on the merchandise.

- drive our cars, if the tyres are made by Goodyear, they have been holographically tested for safety.

- fly in a plane, if the optics are from Marconi Avionics the pilot reads the instrument panel by means of a holographic head-up display so that he doesn't have to move his head around and lose vital seconds. Rolls Royce has improved the performance and safety of its plane engines with its use of holography.

- make a phone call in a British Telecom cardphone, the actual phonecard contains an invisible hologram used to keep track of the amount of units being used up.

- pay with a credit card, in the very near future it will contain a hologram which tells the shopkeeper that it is not a counterfeit card, simply because holograms cannot be forged.

- receive a bill for dental work, it could be accompanied by a hologram as proof of work done.

All these holograms and many more are on show now at Light Dimensions.

EPILOGUE

We all know how much photography has altered our lives in its 145 year history. Whether in the newspapers, movies or on TV and videos, every day we see the fruits of its evolution. We have shown you the first 36 years of holography. Just imagine what the next 100 years will bring!

SECTION 5 - CHILDRENS SECTION

Last but definitely not least, we have created a special section for children with holograms hung at their height. Holography is still in its infancy with many teething problems, such as the limited viewing angle. Like our children holography will grow and become more proficient in the future. Meanwhile here is a chance for our smaller visitors to see holograms of Mickey Mouse, Dungeons and Dragons and many more to ensure their enjoyment and encourage them to experience the vision that is ultimately part of their future.



PHOTO: CHRIS GREGORY

"MICKEY MOUSE" BY ADVANCED HOLOGRAPHICS

Grateful Acknowledgements to:

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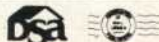
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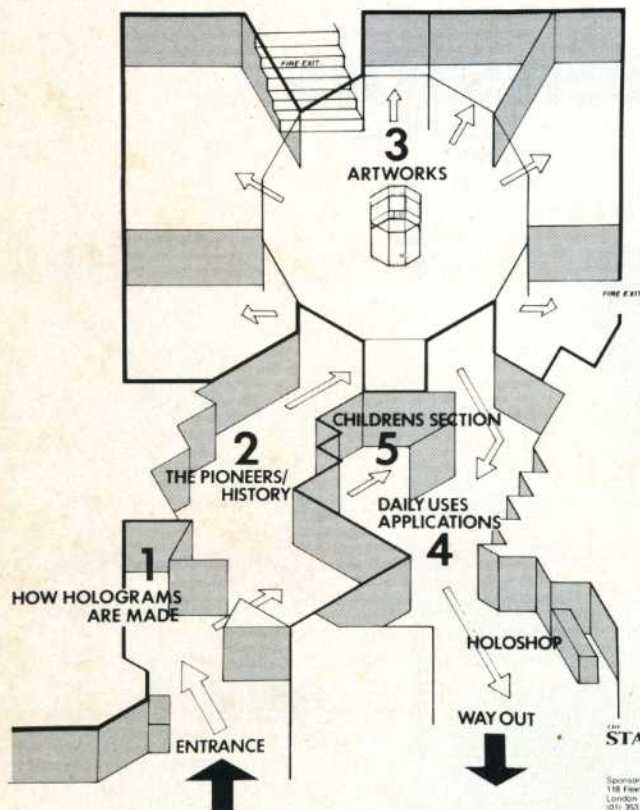


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