



Dennis Gabor

1900 - 1979

Awarded the Nobel Prize for Physics in 1971

Dennis Gabor was a famous Hungarian engineer and physicist. He is widely known for his work on ***holography***, ('*holos*' is the Greek word, meaning '*whole*'), the method of photographic recording and reproduction of three-dimensional images.

The technique is to illuminate an object with monochromatic light, and place a photographic film so that it is struck by the light scattered from the object and also by direct light from the source (which must be a laser). Interference between the direct and scattered light leads to the recording of the information as a complex interference pattern on the film. If the photographic record is then illuminated with the laser light, a three dimensional image of the specimen is generated.

If somebody has never seen a hologram, he would not believe it possible ! **A holographic image (especially coloured) is fantastic !**

Dennis Gabor was born on June 5th, 1900, in Budapest. His father was a businessman. Gabor studied at the Technical University in Berlin, where he obtained a doctorate in engineering in 1927. At the beginning of his career he studied the fundamental processes at work in the oscillograph and this led him to other electron-beam devices such as electron microscopes and TV tubes. This aroused his interest in electron optics.

He worked initially as a research engineer for Siemens and Halske. In 1933, with the rise of Hitler, he left Germany for Britain. There he worked for the Thomson Houston Company until 1948. It was here that he wrote his first paper on communication theory, and developed a system of stereoscopic cinematography. At the start of 1949 he joined Imperial College in London. Working on electron optics he came to holography.



Holograms are now used everywhere

Dennis Gabor said he got most of his ideas while he was shaving, but his most brilliant idea came to him while he was sitting at St. Andrew's Tennis Club in Rugby, waiting to play tennis. He unexpectedly left the Club to check his new idea.

At that time there was no suitable source of monochromatic light, so holograms could not be made until the laser was invented more than ten years later. Now we have holograms on every credit card.

After his retirement in 1967, Gabor was elected Emeritus Professor of Imperial College in London and staff scientist at Stamford, Connecticut.

From 1958, Gabor devoted much thought to the future of our industrial civilisation. He was a member of the Club of Rome and was a co-author of its report '*Beyond the Age of Waste*', (1978).

Gabor was a relatively short but sturdy man with courteous manners. He found time for swimming, writing and reading.

He was married and described his wife to a reporter as '*...one of those people...who can make other people happy*'. The couple had no children.

Due to the wide variety of holographic applications (information storage, pattern recognition, art etc.) it brought acknowledged success and world wide attention to Gabor. He received numerous awards, including the Nobel Prize for Physics in 1971.

He was born in Budapest

