

## 3D Image Display System "Morphovision"

**W**e constructed a 3D image display system, which we call "Morphovision". Morphovision is based on an entirely new idea, and is the product of a joint research project between STRL and Toshio Iwai. Prof. Iwai is a media artist and a professor at the Research Center for Advanced Science and Technology of Tokyo University.

The Morphovision device illuminates special light at an object rotating at high speed, making the shape of the object to change in appearance. The observer does not need special glasses to see the object take on different shapes, and the effect can be seen from various angles. Morphovision employs persistence of vision, which is a characteristic also utilized in TV systems. Therefore, it holds potential as a new 3D image display technique for TV systems.

Mr. Iwai created the Morphovision art piece, "Distorted house", and it was extremely popular among visitors of the exhibition "Visualize - The history and the futurescape of visual media", held at the Tokyo Metropolitan Museum of Photography.



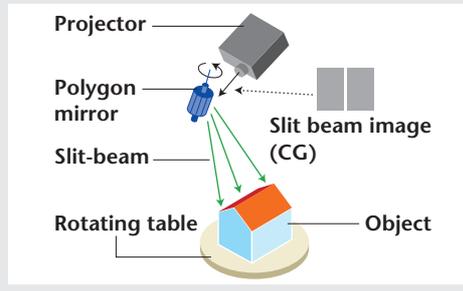
Actual model standing still



Three-dimensional image using Morphovision

### Schematic representation:

Light is irradiated from the projector with a slit beam image, and is reflected off a rotating polygon mirror. Slit beam image is scanning with the time difference, and it illuminates an object on a rotating table. The high-speed rotation of the object, which is synchronized with the scan, produces an afterimage effect on the eye, making the object's shape appear distorted.



## Lecture at the University of the South Pacific

**L**ectures and practice sessions dealing with image processing and CG were given at the University of the South Pacific (USP), located in Suva, the capital of the Republic of Fiji. These sessions were conducted from June 27th to June 30th. This lecture was a part of JICA-led project\* to promote the IT in the South Pacific region. USP's Computer Sciences department has a plan to establish a video-related course, and it has invited experts to give lectures to the staff who will teach the new course.

Some of those I met during my stay told me that diffusion of IT is an urgent matter in developing countries. In contrast with the common idea that priority should be given to other issues, such as welfare, first. This line of thought aims to ensure the most important thing, public safety, by enhancing information distribution through the Internet.

While it might have been better to give a video-related lecture after the aforementioned safety assurance measures have been dealt with, I personally felt that IT and all of its support activities are of vital importance to the people of the South Pacific region.

\*JICA : Japan International Cooperation Agency



At the lecture site, a USP laboratory