

ART TECHNOLOGY

Windows Into Another World

'Images in Time and Space' exhibit displays 150 holograms from 15 countries

By Simpson L. Garfinkel

SAN JOSE, CALIF.

AN exhibition of holograms is a very strange sight indeed. The frames themselves often seem empty, because many holograms can be seen only from certain angles and distances. The result is an eerie effect, in which the holograms appear to "turn on" when the viewer approaches them and "turn off" when the viewer walks away.

Tiny lamps suspended from the ceiling shine bright spots of light onto the three-dimensional images at the precise angle required for optimal viewing. The rest of the gallery is dimly lit, with the walls often painted gray or black to cut down on stray reflections, which can interfere with the effect.

Holograms are like windows into another world. Walk up to one, and look inside: The image can be anything from worldly experience — a child's face, a flower, or a broken glass. Alternatively, the image might be from a strange and foreign world of form and color — shapes that change as one moves to get a better look at them, images of the imagination. Any images that can be envisioned can be "painted" in a hologram.

"Images in Time and Space" is a collection of 150 holograms from 15 countries. The show opened in Montreal in May 1987 and then was on view for a year at the National Museum of Science and Technology in Ottawa. The first United States stop is San Jose, where "Images in Time and Space" has been on display at 67 North San Pedro Street since last October and remains on view through the end of February. This summer it will return to Toronto.

The exhibition's permanent home will be a museum dedicated to holography, to be constructed somewhere in Canada. The Associates of Science and Technology, the



'DIGITAL ROSE': William J. Molteni's computer-generated rose is showered with blue raindrops.

non-profit Canadian group which owns the collection, hopes to raise enough through this exhibition's tour to pay for that museum and an accompanying educational center, dedicated to teaching the public more about holography.

EARLY holograms could only be seen from narrow viewing angles and distances. But that didn't matter very much, because they were often intended more as demonstrations of the science of holography than as artistic endeavors. They were like dancing bears, where it is not how well the bears dance, but the fact that they can dance at all, that matters.

Likewise, with early holograms, the viewing public was often far more impressed by the technological feat of three-dimensional pictures than the pictures' subject matter. Holograms of four chess pieces, arranged in a diamond and illuminated by dim, red laser light were common icons in science museums in the 1970s.

In the nearly two decades since then, however, holography has experienced a multitude of breakthroughs and technological developments. Holograms can now be illuminated by conventional lights, rather than lasers. New films and techniques have made them much brighter and have let them be seen from a wider range of angles and distances.

At the same time, many holographers have turned their attention from solely technical concerns to artistic ones. Today, in addition to being a tool that has found use in many scientific fields, holography is an art form. Indeed, for the past 11 years, New York City has been home to the Museum of Holography, with its impressive and evolving collection of state-of-the-art holograms. Reprints of many of the museum's best pieces have found their way into "Images in Time and Space." But the curators of the "Images" collection have resisted including many of the holograms that are important historically but poor by today's standards.

"Images in Time and Space" stresses holograms of lasting merit. Many of the

commercially commissioned images, such as the life-size hologram of the inside of a Pratt and Whitney jet engine, are breathtaking because of their technical excellence. Such holograms are regarded as tools, not pieces of art in and of themselves. Other images may be powerful because of the emotions they convey. Some of these are multimedia collages, or combine novel technical features unto themselves.

Several are movie holograms — long, rectangular, often wrapped into a cylinder, with a hundred or more sequential images stored in them and visible each at different viewing angles.

"Time-Man" (1984), by Sharon A. McCormack, depicts a chemist who mixes a potion and drinks it. Moments later, his drink explodes into wavy streams of line and color, which take over the scene. Against this background, a man clad in a jump suit appears and spins away, out of control, through the ever-changing space.

Many of the holograms indicate a sense of humor. "Movie Theater" (1977), by Dan Schweitzer, depicts an audience in a movie house watching a closeup of a man on a screen. Suddenly, the man's hand reaches out of the screen and grabs a member of the audience.

Milk crates are provided for children to stand on, to allow them achieve the proper viewing angle — a provision that is especially important when viewing the older holograms.

The most technically remarkable hologram is a full-color picture of a Japanese doll, from the Kyoto Institute of Technology. "Dojo" (1985), by Toshihiro Kubota, is a stunning reproduction of its subject, so clear that one can see the threads in the doll's red and green clothes. At first look, it is hard to believe that there is not a doll hidden behind a window of glass.

The implications of "Dojo" may not occur to all the exhibition's visitors. But in time, museums may display and exchange high-quality holograms of their valuable original works, leaving the actual collections in secure and climate-controlled rooms.



'DOJO': At first glance, it is hard to believe that there is not a doll hidden behind a glass window.

le
black

...all there. Every director named
...either quit or been fired. Ge-
...tier, director of the Théâtre de
...ic in Brussels, directed the Bas-
...ra for four months in 1985 and
...mond Soubie resigned his post as
...of the board of the future Bas-
...ra last November. Pierre Voz-
...arenboim's administrative part-
...Bastille, was fired in May 1988.
...arenboim was fired Jan. 13.
...ulez, another key figure in the
...m, left also.

...oim has already found a new
...ill replace Sir Georg Solti at the
...ie Chicago Symphony Orchestra
...991.

...is criticized for his lack of expe-
...h opera. In his own defense, he
...t that painters would not make
...seum curators: "They would
...what they like." It is precisely
...programming for the Bastille
...that Bergé and the team
...that was in place before
...his arrival were in total
...disagreement.

...Originally, M. Mit-
...terand's Bastille was to be
...the Georges Pompidou
...Center of opera: open to
...the masses, to lesser-
...known artists including
...avant-garde, and non-
...elitist. With its two audi-
...toriums, the new opera
...will have the capacity to
...give two performances an
...evening or some 700 per-
...formances a year, as com-
...pared with the maximum
...of 250 performances at
...the Garnier opera house.

...It would be possible, says
...an, to rehearse "Tristan" in the
...arrange the lighting for "Car-
...e afternoon, and present
...the evening. "But we would
...ive three orchestras, two choirs,
...more money," he points out.

...e time being, the Bastille Opéra
...e makings of a huge white ele-
...ch which is why Bergé is insist-
...ing at of performances — 250 a year
...in theater, and another 200 in
...er one. Barenboim and Boulez
...re conservative figure in mind:
...rmances for the first two years,
...up to a maximum of 160 in the
...on.

...oice between an elitist or a pop-
...e is now settled, with all the key
...of the original team eliminated.
... argue, with some justification,
...quantity of performance will be at
...se of quality.

...ig question: Are there enough
...s to fill the Bastille, even if it
...to offer high-quality music at
...prices? No one, at this point,
...: answer.

VICTOR DUBINCOFF FOR THE JOURNAL