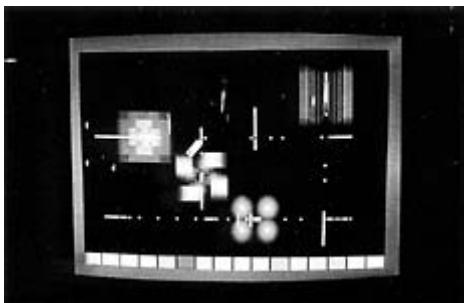


**from the flipbook to the museum on the air**  
**TOSHIO IWAI**



Screen shot from Einstein TV, 1991. Fuji Television



MUSIC INSECTS 'Exploratorium Version', 1992



Media Epoch Exhibition, 1993. Itabashi Art Museum



Screen shot from UgoUgo Lhuga LIVE, 1993, Fuji Television



Screen Shot from UgoUgo Lhuga LIVE, 1993. Fuji Television



Screen Shot from UgoUgo Lhuga LIVE, 1993. Fuji Television

When I was in primary school, my textbooks were full of little flipbook-like "moving images." From simple lines that leaped around, to the movements and transformations of cartoon characters I had created, or even the moon circling the earth, I would fill the page corners with pencil drawings, and thrill to the resulting animations. Twenty years ago, these "moving image graffiti", or flipbooks, were my one childhood personal imaging device — the pencil and paper my one creative tool kit.

Upon entering university many years later, I was inspired by the personal animation work of visual artists around the world, I began experimenting in film and video. At the same time, I also became interested in the history of animation. Through researching this field, I became aware of the many moving image technologies that existed before the advent of the movies. There, buried in pre-cinematic history, along with the phenakistiscope, the zoetrope, and other such technologies, was the flipbook that I had played with so often. Reminded of the fun I had had, I began making flipbooks again.

But my new flipbooks, this decade later, held a shock for me: they were a freer medium than the film and more than the video I had been working in. There was no need to secure a screening time or place, and no need to set up equipment. You could carry them anywhere, and take them out of your pocket to show your friends at any time. You could control the projection speed with your hands. The personal nature of this medium was superior to anything else available at that time. This, I thought, was a very interactive medium. Carrying around my flipbooks, and playing them back in the palms of my hands, I formed a very close relationship with their images. I felt the space and weight, the sound and feel of the flipping pages, these experiential elements of the images — all were essential elements of personal imaging systems that had been trimmed and discarded somewhere along the evolution of image media into mass media culture. The flipbook was returned to me as the imaging system with the greatest freedom and potential for creative expression.

Armed with these inventions, long buried in the shadows of the discovery of the cinema, I quit my studies in industrial design, and began working on imaging in earnest. I began by linking these imaging media with modern technologies. Using computers and video printers, I

created flipbook animations, and computer manipulated phenkistiscopes. In my work 3-Dimensional Zoetrope, I placed figurines within the zoetrope. Winding the handle, they moved as three-dimensional animations.

From 1985, I used video monitors and projectors as strobing light sources in my Time Stratum series, to create an illusion of three-dimensional images. With this series, I sought a freer form of encountering the world of imagery than is found in contemporary mass media. When we go to the cinema, we must meet schedules, and sit still staring at the screen until the movie is finished with us. I wanted to loosen this restricted bias towards, for example, the approach we take towards sculpture — where viewers see the work at their own pace, and from angles which they themselves decide. The Time Stratum series was an inquiry into my own questions about what would happen if one were to evolve pre-cinematic technologies across this 150 year blank.

A few years ago I began using the personal computer, both as a creative tool and creative material, and it has changed my work considerably. I believe that within the computer there is a great potential for creating a new relationship between people and their images. The computer is a medium to not only revitalize, but also re-establish and further develop the interactivity and other participatory elements found in pre-cinematic imaging technologies — those very elements that were trimmed and discarded on the path towards mass media. Especially for the real-time manipulation of audio and visual components, the computer has achieved levels beyond any previous medium. I have created a number of installations where such new creative potentials of the computer are used. Like my early pencil flipbook drawings on paper, the user once again can control both the visual and audio components.

When insects encounter a colored "dot," they emit sounds and colors that correspond to it. They change direction according to color too. Through painting colors around the insects, we control their movement and create music in realtime. Computer tools like this, with their potential for drawing out latent creativity, have been an important creative focus for me lately.

Einstein TV (Fuji Television, October 1990 to September 1991) was a 30-minute late-night program for science topics in a "news program" format. It featured two announcers, standing within a set made entirely of "3-D" computer graphics, who would reach out to activate (virtual) graphic icons in space, opening windows that spring out of virtual set props, such as tables, to display the program's visual and textual data. My objective in making this program was to create an image of the news show of the future, where the newscasters are allowed to manipulate the exposition of their stories more freely.

Ugo Ugo Lhuga (Fuji Television, October 1992 to March 1994) was an experiment in offering the kinds of things that previous children's shows wouldn't. We created Ugo Ugo Lhuga originally as an entertainment show for kids. Broadcast early every weekday morning for 30 minutes, with each showing the audience grew and diversified, coming to include viewers of all ages — eventually achieving nationwide cult status. The parts that I created within the program included where the stars of the show, two children called "Ugo Ugo," and "Lhuga," interacted with computer-generated figures. I designed the computer-generated characters that the children interacted with, their (virtual) room, even producing most of the computer graphics myself. Also, in order to make the characters appear alive, I devised systems for synchronizing the computer-generated characters' lips to the audio signals from live voice actors, and creating the various facial expressions needed for them to respond to the kids' improvisations. With this system, the children were able to speak and interact with the computer-generated characters in real-time, digitally composited into their computer-

generated room. The children's lines were unscripted. Through using real-time computer graphics, we were able to capture their spontaneous charm in a natural light.

Ugo Ugo Lhuga live was an experiment, born out of the Ugo Ugo Lhuga program, for developing the possibilities for live performance in a program begun under premises of prerecording and editing technologies. The children were able to interact with computer-generated characters broadcast in real-time. Also, in nationwide call-ins, children across Japan were able to speak with the computer-generated characters. In the section of the program called "Ugo Lhu CG Sumo," for example, children from across Japan were able to send in various strange sumo wrestler figures which they had drawn on postcards, and contest them during the program. Watching their televisions at home, these kids would scream into the telephone, trying to raise a higher voltage over the phone lines than their opponent, in the hope of pushing his or her character out of the ring. Through such experiments, we were able to bring new levels of interactivity to the television, and turn it into a place for children to play in, developing its potential as an image medium for them, and opening up new directions for children's programming.

Media Epoch Exhibition / Museum on the Air (Fuji Television and Itabashi Art Museum, August 1993). In the summer of 1993, I was asked to do a solo exhibition at the Itabashi Art Museum, for which I proposed a combination exhibition and series of live broadcasts tied to the Ugo Ugo Lhuga television program. Installing 16 computers in the museum hall, and developing a digital painting software program that would allow anyone to create simple animations, I held an exhibition of works made by the children during their visit to the show. During a 25-day exhibit more than a thousand animations were created. Also, during one week of the exhibition there were live broadcasts from the museum, which featured the children's electronic paintings sampled in real-time, and showed them interacting with the show's computer-generated characters. Fax art sent to the museum from viewers nationwide was also featured within the program. Children familiar with the program thronged to the museum, and thousands of facsimiles were sent from all over the country. Through linking together the television and museum, typically both closed communications media, an entirely new set of possibilities was created.

English translation by David D'Heilly