Cutting-Edge Media Content and Traditional Performing Arts in Japan

Traditional Culture Reborn When Fused with 21ˢᵗ Century High-Tech Media Arts

By Kawaguchi Yoichiro

Introduction

My work explores the potential innovation in the convergence of the Japanese media content industry and Japanese traditional culture that may become more commonplace in the future. Here, I will discuss a few examples of such collaborative efforts. Above all, I would like to take this opportunity to look at the issue of how the five senses – particularly, sight, sound and touch – which form the key elements of virtual reality, relate to traditional performing arts. From there, I hope to shed light on the signs emerging on the horizon of future Japanese media content.

Kawaguchi Yoichiro, "Eggy," 1990

Digitalizing Traditional Performing Arts

How to create the digital space collaborating with traditional performing arts? Performers and/or the audience interactively react with the concept of the world traditional performing arts on the stage.

I set up a massive screen set to create a multifariously emotive GEMOTION space that immediately incorporates the audience's every motion as the emotional parameters of the resulting artwork. When the large number of children in the audience running in front of the screens, their movements set the GEMOTION piece in motion, and the faster and louder the children ran and played, the more the colors and sound would flow and change in response. Much like a concerto, the resulting piece was the product of the emotions that arise when humans and art come together in animated interaction. To participate in this interaction, visitors actually enter the piece's internal conceptual space, and feel they have a glimpse into the full significance of the artwork from within the inner working of the computer generated image (CGI). The first attempt of this was staged at an international media arts exhibition at the Daejeon Municipal Museum of Modern Art in South Korea at the end of 2000.

The the opening show for the SIGGRAPH 2001 featured a live dance performance, with the dancer outfitted in a "wearable computer." The GEMOTION program was controlled by the data from the movements of each part of the dancer's body. The computer is able to perceive the dancer's most delicate movements, simultaneously changing in the shape and color of the CGI that instantaneously respond to the performance.

Japan's traditional performing arts have given rise to a refined, stylistic beauty all their own. In the opening show of eAT KANAZAWA '02, I experimented with art-science interaction that would translate aspects of this traditional art's incredible beauty into CGI. Transforming the uniquely delicate, yet splendid Japanese dance movements into abstract visuals created in emotive computer graphics, the result was an array of metamorphosing shapes and colors.

The waters of Japanese dance run deep, and experimenting with the creation of CGI that represent these taut, contained movements and mysterious, yet refined world is an extremely appealing prospect. Creating the feel of *wabi* and *sabi*, and the delicate colors of the hydrangea brought to life an artistic voice entirely new to digital space.

Cell Phones as Digital Genetic Code

Everyday objects that are not usually associated with art can also be incorporated into the artist's work. This was the concept behind the idea to create an exciting and engaging conceptual space for interactive communication in which the audience could actively participate in the performance using their cell phones. The larger screen gives participants an overwhelming sense that they are a living part of the performance. The deeper inside they feel they have gone, the more they are gripped by a sense of otherworldly reality – much like interplanetary space travel in which artificial life lives and breathes. The audience is also able to play around, directing cell phones toward the giant CGI projected onto the screen in whatever manner they wish as the mood strikes them. If a participant calls the growth model that generates the computer program behind the performance, his or her personal telephone number is instantly recorded when its signal is received. These numbers serve as the genetic code, the growth stimulus integers

Kawaguchi Yoichiro, "Gemotion," 2002 (left) and Interactive performance with Japanese traditional dancer, Fujima Shiho

that directly affect the creation parameters of the growth model, and the participants' own personal growth model bursts onto the screen, transforming and growing moment-by-moment before his or her eyes. Nearly limitless possibilities in terms of shape, and the different number associated with each cell phone, guarantee each participant a completely personal work of art generated by a uniquely individual growth model. This experiment allowed the audience to enjoy creating a growth model artwork only they themselves are capable of generating with their personal phone. It is an electrifying experience to watch an artwork that is yours alone come to life before one's eyes. The genetic code carried in one's cell phone number works on the piece in a cyber sense as if the artwork were a part of one's physical self.

At an exhibition held at Tsukuba Museum of Art in April 2002, I made color printouts of the individual artworks available for those who wished to take them home. This service proved extremely popular with people who lined up every day around the "cell phone corner." This experiment – creating an experience for an audience, facing a large screen and using their cell phones, to create the genetic code for a dense and detailed work of art, which they can take out – is a novel approach that differs entirely from any artistic style tried in the past.

I also created this installation space for cell phone-generated communication at the opening performance of the international SIGGRAPH conference held in the United States in July 2002. The audience vied with one another to call the growth model at this installation. The audience can also exchange the genetic codes that form the basis of their own personal artworks to create next-generation art that would represent the genetic artworks of the child or even grandchildren of the original pieces. The possibilities are fascinating – artificial genetic life forms generated by growth models from cell phone data open up other realms of communication in which sharing a new type of artistic space within cyber space becomes possible.

Digital Screen Responds as Living Entity

Now, imagine a flat screen suddenly stretch and contract. Imagine the surprise of witnesses' shock at seeing such an unexpected phenomenon. What would happen if the screen in a movie theater, for instance, began to move toward the audience, bulging and collapsing as if it lived and breathed? For quite a while now, I have wanted to create this moment of pure, child-like, novel surprise. I have been fascinated by the idea of projecting images that create the complete illusion of three-dimensionality (3D) onto a screen, making it seem to stretch and contract like a mollusk to elicit the full range of human emotion captured in child-like wonder.

This is where my concept for GEMOTION, "generative, emotional, interactive artwork," began. Realizing that it was technically impossible to jump immediately to a movie theater-size screen, I decided to conduct my first experiment on a miniature screen, stretched over one end of a cylindrical tube.

First, 3D images were projected onto the cylinder's false-bottom undulating screen. In the same manner, it is also projected onto the surfaces of the surrounding environment, giving the audience, who are enveloped by these images, the impression that they actually standing inside the image itself.

The audience approaches the cylindrical screen placed at the center of the installation space. As they do, the flat screen senses their movement and stirs to life. When the seemingly flat screen suddenly begins to move, the audience reacts with shock and surprise. Amazed, they move closer to the cylinder at the center of the room, and as they do, it

suddenly begins to bubble up and collapse into itself, creating even more surprise. The screen rises and falls in sync with the 3D effect of CGI, making the audience believe that it is a real living entity. Mixing cyber and real space has an oddly stimulating effect that is felt throughout the entire body, and it is this aspect that is attracting more and more attention to GEMOTION artworks.

What is involved in generating real-time responses from a projection screen to make it seem as if it were a living entity? Where are the sensors located? Is it possible for a work of art to respond while going through the natural progression of emotions like a living being does?

Emotional reactions take many forms: intensity, quiet, serenity, seductiveness, childishness, innocence, weakness, anger, among others.

As described above, I have named this type of experiment GEMOTION. The word GEMOTION, meaning Gene, Growth + Emotion, has the same emotional connotation as the concepts behind my new pieces. Hypothesizing genetic codes, growth and emotion, these pieces are designed to open the doors to a new world of reality for art.

Seeing with one's eyes, touching with one's hands, feeling on one's skin, eliciting reaction – these are the basic behaviors involved in human contact. Moving one's body, gesturing, dancing, when the audience wishes to confront a work of art in these ways, this interactive space is transformed into a living, breathing "channel" that makes possible a new type of human-art communication. **JS**

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