Students' projects of interactive media-installations in SUAC

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ABSTRACT

This is a studio report of researches and projects in SUAC (Shizuoka University of Art and Culture). SUAC was founded in April 2000, and organized NIME04 as you know. SUAC has "Faculty of Design" and "Department of Art and Science" and all students study interactive systems and media arts. SUAC has organized Media Art Festival (MAF) from 2001 to 2005. Domestic/overseas artists participated in SUAC MAF, and SUAC students' projects also joined and exhibited their works in MAF. I will introduce the production cases with interactive media-installations by SUAC students' projects from the aspect "experiences with novel interfaces in education and entertainment" and "reports on students projects in the framework of NIME related courses".

Keywords

Interactive Installation, Sensors, Media Arts, Studio Reports

1. INTRODUCTION

SUAC (Shizuoka University of Art and Culture) was founded in April 2000 [1]. Hamamatsu City, Shizuoka Prefecture, where SUAC is located, is conveniently situated almost midway between Tokyo and Osaka. Hamamatsu has numerous companies globally famous for their advanced technologies [Yamaha, Roland, Kawai, Suzuki, Honda, etc.], and many cultural facilities in harmony with nature. SUAC is located in the center of Hamamatsu City. Museums and other cultural facilities are already clustered in this district. SUAC has two faculties and six departments - the Faculty of Cultural Policy and Management (Department of International Culture, Department of Regional Cultural Policy and Management and Department of Art Management) and the Faculty of Design (Department of Industrial Design, Department of Art and Science and Department of Space and Architecture).

The 2004 International Conference on New Interfaces for Musical Expression (NIME04) was hosted by SUAC. The conference consisted of 3 full-day event where research papers, demos and performances were presented that correspond to the state-of-the-art concerning new interfaces for musical expression (Figure 1) [2].
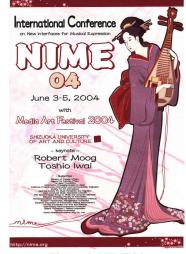
Figure 1: NIME04

2. Shin-Kai (May 2000)

The project "Shin-Kai" [forest and sea] (Fig.2) was an installation exhibited as the first collaboration of students and teachers. This work was opened to the public in the event after two months of the SUAC establishment, so all students were the first graders. The infrared sensors were built in the wood poles, so sounds and graphics were changed in real time with people walking around.
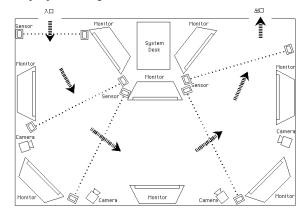

Figure 2: Floor plan of "Shin-Kai"

3. Kazatora (December 2000)

This project is the first case opened to the public as students only. One big pinwheel (Fig.3) and three small pinwheels reacted to the amount of light with the solar battery sensor and rotated according to MIDI information. This work was exhibited not as an installation work exhibited in the gallery but as a performance with seven student performers on stage. All of the production of the pinwheels, the Max/MSP patch development and the composition was produced only by students of the first grader.
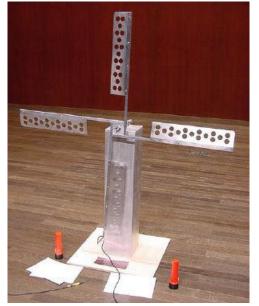

Figure 3: Installation of "Kazatora"

4. Ki-Gen (May 2001)

The project "Ki-Gen" [origin] (Fig.4) was an installation exhibited in the event of 1st birthday of SUAC, and all students were new first graders. The sound and CG were changed in real time with people walking between four plasma displays and three projected screens with the infrared sensors. People could touch objects as touch-sensors or affect CCD camera as visual-sensors.
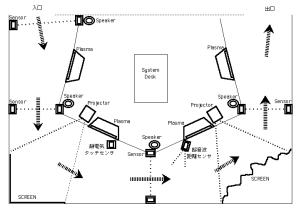

Figure 4: Floor plan of "Ki-Gen"

5. MAF2001

In August 2001, we organized first SUAC MAF (Media Art Festival) 2001[3]. MAF2001 had the following contents : (1) two Live Concerts with 12 composers, (2) Symposium of IPSJ (Information Processing Society of Japan), (3) Installation Gallery exhibiting 15 works, (4) Movie theater with 14 works, (5) CG Gallery exhibiting 12 works. Here, I introduce SUAC students' four projects as follows.

5.1 Tetora (August 2001)

This work was created by four students of the second grader. If people shake hands with the "wrist" object made of silicon rubber, the expression of the face in the display screen changed with strange sounds (Fig.5).

Figure 5: "Tetora"

5.2 Hachi (August 2001)

This work was also created by four students of the second grader. When people were detected by ultrasonic sensors with eight different directions, the table turned and a lot of bees stared him/her in the front (Fig.6).

Figure 6: "Hachi"

5.3 Shocking (August 2001)

This work was also created by four students of the second grader. The title "Shock" means "Eating" in Japanese. When people pulled any codes from the ceiling object, "eating/cooking" images appeared on the screen with generating "eating/cooking" sounds. (Fig.7).

Figure 7: "Shocking"

5.4 Happy Maru (August 2001)

This work was also created by five students of the second grader. The title "maru" means "round" in Japanese. They produced some boxes with a round hole   (Fig.8). People could watch "happiness" by peeping at the hole of a certain box. People could hear "happiness" from another box's hole. People could see a beautiful scenery through a kaleidoscope by peeping at the hole of another box.

Figure 8: "Happy Maru"

6. INTERCOLLEGE (December 2001)

In the computer music community in Japan, there is "Intercollege Working Group" that consists of the relating universities. SUAC has participated in "Intercollege Computer Music Concert" sponsored by the "Intercollege Working Group" every year since 2000. Motozono Chisako of the second grader exhibited her installation work in 2001 (Fig.9). This work's shape was as if a big egg made of Glass Fiber, and many small stones were put on surroundings. If people throw a stone into the hole at the center, beautiful light

leaked from the inside and the guitar sounds came.

Figure 9: Motozono's Installation

7. MAF2002

In August 2002, we organized the second SUAC MAF 2002[4]. MAF2002 had the following contents : (1) 2 Live Concerts with 11 composers, (2) DSP Summer School with IAMAS (inviting Kit Clayton : programmer of "jitter" in Cycling'74), (3) Installation Gallery exhibiting 12 works, (4) Movie theater that with 15 works, (5) CG Gallery exhibiting 10 works, (6) Europe movie theater. Here, I introduce SUAC students' four projects as follows.

7.1 Ketsu-Puttin (August 2002)

This work was created by 2 students. This work was like two big eggs (Fig.10). People lifted or knocked down this egg, sensors detected the action and the egg vibrated tremblingly by internal motor.

Figure 10: "Ketsu-Puttin"

7.2 Sand Clock (August 2002)

This work was created by 4 students. This work was a huge hourglass (Fig.11). There were 4000 styrene foam balls, it fell by 1 piece per 15 seconds, and the image was projected to this. Another image was projected also to the styrene foam balls that collected on the floor and were piled up. When people upset a small hourglass on the table, the scene was changed and displayed.

Figure 11: "Sand Clock"

7.3 Kana Koubou (August 2002)

This work was created by 4 students. This work was a kind of game. People was displayed on the screen just in front of him/her with CCD camera (Fig.12). Many musical notes fell at random in the screen, too. People moved the frying-pan right and left not to drop the falling note but to catch it. When the frying-pan was upset, caught and collected notes generated the sounds like playback-music.

Figure 12: "Kana Koubou"

7.4 Kirameki (August 2002)

This work was created by 2 students. People peeped into the hole of this big box (Fig.13). The ultrasonic sensor detected the peeping action and the system gave the flash one after another by 16 flash-tubes. The shadowgraph was projected by the light of the flash, and it became animation by moving 16 sources of light. There were three kinds of sheets of the shadowgraph. It rotated by 120 degrees, and it changed into new animation by the motor after emitting light.

Figure 13: "Kirameki"

7.5 Chess de Pon (August 2002)

This work was created by 2 students. This work was a kind of game (Fig.14). On the table, there were 8*8=64 points. People could put the objects made of the glass on wherever he/she like. The sounds were generated with each place.

Figure 14: "Chess de Pon"

8. Hakoro (November 2003)

This work was created by 3 students. This work was exhibited in the Intercollege hosted by SUAC in 2003 (Fig.15). This work was a room like the cube of 3m * 3m * 3m, and surroundings were screens of the cloth. There were hundreds of small boxes in the room, and a Japanese character was drawn respectively. If people lifted one small box, then new sounds were generated and four projected images changed on the screen surrounding the room.

Figure 14: "Hakoro"

9. CONCLUSIONS

I have introduced some of the production cases with interactive media-installations by SUAC students' projects from the aspect "experiences with novel interface in education and entertainment" and "reports on students' projects in the framework of NIME related courses". There are still a lot of cases that were not able to be introduced in the limit of space. I plan to introduce it with abundant videos in presentation.

10. REFERENCES

[1] SUAC http://www.suac.ac.jp/index-e.html
[2] NIME04 http://suac.net/NIME/
[3] MAF2001 http://1106.suac.net/SS2001/MAF2001.html
[4] MAF2002 http://1106.suac.net/MAF2002/MAF2002.html