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Composition on the Table is a series of artwork which represent the concept of Mixed Reality. Four white tables have various user interfaces such as switches, dials, turn-tables and sliding boards that a player can touch. Projectors suspended from the ceiling project computer generated images onto the tables and interfaces. Projected images change in real time as if they were physically attached to the interfaces when players operate them. Also sounds are produced in relation to the movement of images. Since the interfaces have close relation to the reaction of images, players can operate images and sounds in the same way when he/she operates ordinary interfaces and gradually feels these illusions as equivalent as the actual objects.

The aim of these works is to allow players and audiences to share the world of Mixed Reality thus produced and collaborate to create images and sounds interactively.

Composition

Toshio Iwai



Composition on the Table
No.1 [PUSH], No.2 [TWIST],
No.3 [TURN], No.4 [SLIDE]
1999
Interactive Installation
4500mm x 8000mm x 8000mm

Unconscious Flow
1999
Interactive Installation
5 x 5 x 5



Naoko Tosa

Supported by SONY-Kihara Research Center, Inc.

In face-to-face communication, the occasional need for intentional lies is something with which everyone can identify. For example, when we get angry, circumstances may force us to put on a smile instead of expressing our anger. When we feel miserable, good manners may dictate that we greet others warmly. In short, to abide by social norms, we consciously lie. On the other hand, if we consider the signs that our bodies express as communication (body language), we can say that the body does not lie even while the mind does.

Unconscious Flow "touches the heart" in a somewhat Japanese way by measuring the heartbeat of the "honest" body and using other technologies to reveal a new code of non-verbal communication from a hidden dimension in society. The artist calls this "techno-healing art."

Two computer-generated mermaids function as individual agents for two viewers. Each mermaid agent moves in sync with the heart rate detected by an electrode attached to the collarbone of its viewer. Then, using a synchronization interaction model that calculates the mutual heart rate on a personal computer, the two mermaids express hidden non-verbal communication. The data of relax-strain calculated from the heart rate and the interest calculated from the variation in the heart rate are mapped on the model. The synchronization interaction model reveals the communication codes in the hidden dimension that do not appear in our superficial communication.

For example, when two persons are in a situation where they are highly strained and highly interested, they are assumed to have stress and feelings of shyness, and the animation generates CG-reactive embodiments that behave shyly. When both people are in a situation where they are highly strained and less interested, unfriendly communication is generated.

For a high degree of synchronism, the agents mimic the hand gestures of their subjects. For a low degree of synchronism, the agents run away. When one mermaid agent touches the other, a pseudo-touch can be felt through a vibration device. For background sound, the heart sounds of the subjects are picked up by an electronic stethoscope and processed for output on a personal computer.