

TECHNICAL INSIGHTS
FROST & SULLIVAN
www.ti.frost.com

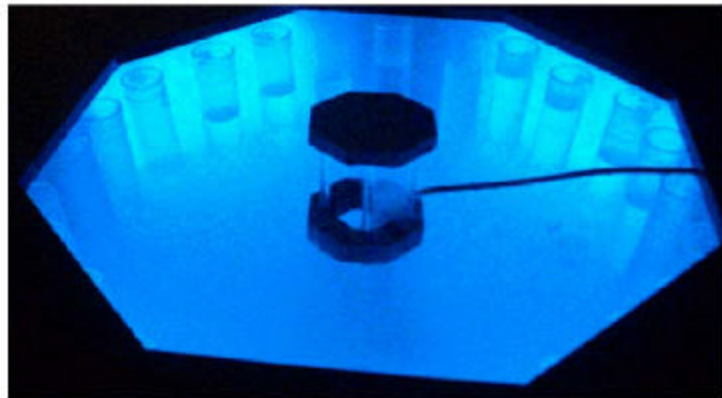
MEDICAL DEVICE TECHNOLOGY ALERT

A COMPUTER-AUGMENTED HEALING TO RELIEVE STRESS

Stress is the wear and tear of the body's experience as it adjusts to its continually changing environment. As a positive influence, stress can compel one to act, can result in a new perspective and new awareness. As a negative influence, it can result in feelings of distrust, rejecting, anger and depression which can in turn lead to health problems such as high blood pressure, heart disease, stroke, head ache, and so on.

The Japanese researchers from Keio University Graduate School of Media and Governance have introduced a stress-relieving device called SUIRIN that provides "healing" using two Japanese traditional craft products, like healing music do. One is called 'Ukidama', a glass ball that represents summer chillness and the other is 'Furin' which also represents chillness as 'Ukidama' does. Speaking to *Technical Insights*, Satoru Tokuhisa, from Keio University Graduate School of Media and Governance and creative director of UTUTU Limited said, "These two products represent Japanese specific summer coolness, and provide healing through visual and auditory sensation. SUIRIN expands these craft products with digital system. SUIRIN enables to give you healing effect by light (visual), sound (auditory), water (touch) and fog (olfactory)." Figure 1. SUIRIN.

Most importantly it provides two experiences to realize healing effect to the user--one is the direct sensory stirring experience by sound, light and fog and the other is the indirect experience that arranges the relax situation which is the psychological precondition to bring about a healing effect. First, the



SUIRIN
Picture Credit: Mr. Satoru UK'TOKUHISA,
Keio University Graduate School of Media and Governance

container's sound is sampled with fast Fourier transform (FFT) through four pin microphones. After the noise is reduced, it is processed through several effects until, finally, a sound similar to the cry of a "suzumushi" (bell-ring cricket) is produced and projected through the speakers.

In the meantime, the output level of each speaker is synchronized with the brightness level of the four colors of the LED at the bottom of the container.

"Through the blending subject and the object, SUIRIN enables users to lose the scale of place. 'Ukidama' is a metaphor of the user himself. The person who plays with 'Ukidama' feels as if they are melting into the water in the container. In the process of sampling the

sound of water and representation in real space through the speakers, users feel like melting in the water gradually. At this moment, immersion occurs. This process makes the user to lose the subject's feeling of the place," said Tokuhisa. This illusion is generated by SUIRIN's core technology.

In the future they are aiming to develop diversity in interaction. "Active involvement of the user not always works for healing. Therefore self-running objects to make interaction will be needed. By preparing objects having various movements, combination of the objects can be made to produce variety of sounds and lights in the water," said Tokuhisa. When asked about the product getting commercialized, Tokuhisa said "if there is an opportunity to realize this technology with companies, I would like to think about it positively." The university is looking for collaborations relating to the product design.

Details: Satoru 'dk' Tokuhisa, Keio University Graduate School of Media and Governance, Creative Director, UTUTU Company Limited, 105-0003, Tokyo Minato-Ku West Shinbashi 2-3-8 Fujii Building 4f. Japan. Phone: +03-5721-9190. Fax: +020-4666-3168. E-mail: dangkang@sfc.keio.ac.jp.