

S-face

SFC makes the future through researches

The human- harmonized world Fusion of Atoms and Bits Yasuaki Kakehi



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“New Human” to be generated by interactive media

The world of interactive media that designs new relationships between humans, objects and the environment.

What Associate Professor Yasuaki Kakehi creates is a world that expands human potential by removing the barrier between Atoms and Bits. It is not a world where the advance in technology deprives humans of their unlimited potential. Rather, it is a world harmonized with humans that extends the limits of what humans can do, and allows them to become a “New Human” oriented toward an even higher phase.

The new relationship between humans, objects and the environment

Inter-Action is, in a manner, the design of the relationship between action and action. It is the design of what is intended to mark a new relationship between humans and humans, between humans and objects, and between humans and their environment. Since the 1990s, the importance of such interactive design has been emphasized. When a new medium becomes prominent in society, how interaction with it – how humans relate with it – should develop is discussed. The term “interactive media,” which I specialize in, connotes the resolve to build a new media from the ground up ourselves, and design the relationship between humans and their environment. One of the keywords indicative of this approach is the idea of “Designing Real.” By building a bridge between the physical world (Atoms) where we find our own bodies, and the digital world (Bits) that is composed of computers, we are cultivating a new REAL - one that fuses the characteristic features of both worlds. In such a world, we believe, we can find a new form of media, one where the environment and humans are so deeply fused and integrated it is hard to distinguish between Atoms and Bits.

Present new things like a magician

The TECHTILE toolkit makes interactive media easier to understand. This is a toolkit that records and edits “tactile sensation” and transmits it. Using simple equipment such as an oscillator, a microphone and an amplifier, it records, edits and transmits the tactile sensation of an object. For example, the real tactile sensation of a marble in a cup held by one person is transmitted to an empty cup held by another person without losing any of the sensation. Or,



the sound of hitting a shuttlecock by a racket is recorded by a personal computer as digital data, and when it is converted into oscillation data, it gives one real tactile sensation by oscillating an oscillator.

Like a magician, so to speak, we provided equipment that not only presents something never seen before, but also allows any user to make things he or she really needs or really wants to make. This was chosen among the Best 100 of the Good Design Awards in FY2012.

In dePEND, a ballpoint pen you can find anywhere moves spontaneously due to magnetism. It can draw graphics and designs preinstalled in a computer, but it goes far beyond that, and has the potential of generating new creativity by interaction between a pen and a human.

More positive “HABILITATE”

For me, another keyword is “HABILITATE.” This verb was coined by dropping “Re” from the word

“rehabilitate.” While rehabilitation refers to returning one’s state from ‘minus’ to ‘zero’ and adapting to the environment “gain (Re),” “HABILITATE” offers a more positive nuance of seeking an uplifting influence on one’s state from the starting point that is the present.

So far, interactive media has played the role of showing us the near future. On the other hand, we have to admit that this has led to the lack of a “sense of being on the site,” or a sense of how interactive media is going to change the way humans actually live. As technology is conclusive as technology, we believe that it is very important to be able to talk about what sorts of experiences or expressions we can find beyond that in the process. The range of our activities expands each day. For example, the advance in nanotechnology makes it possible for technology to intervene into the human body itself. This presents a new issue in the sense that the boundary between technology and humans is becoming blurred, and also presents a new challenge in the sense that the fields we can work in are also broadening.

TECHTILE toolkit



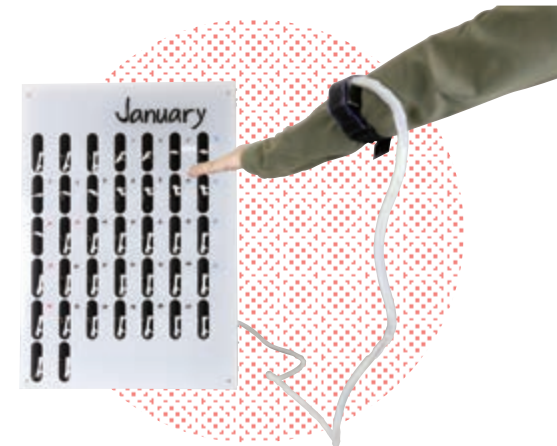
Previously, interaction with computers mainly was audiovisual. But the TECHTILE toolkit records, edits and transmits “tactile sensation.” This system is disclosed in the Open Source.

dePEND



dePEND is a system for expanding and supporting sketches through the fusion of pens and paper. By attracting the head of a ballpoint pen by magnetism, it can draw designs and graphics preinstalled in a computer and supports the human body’s spontaneous movements.

HABI tools



HABI tools, an example of implementation of the HABILITATE, are custom tools to support people who seek recovery through rehabilitation. They encourage users to do specific exercises necessary for rehabilitation and record bodily movements using sensors. This photo shows a piece that records and presents the achievements of training by moving arms.



Profile Yasuaki Kakehi

Associate Professor, Faculty of Environment and Information Studies, Keio University; Ph.D. in Interdisciplinary Information Studies, the University of Tokyo; specializes in interactive media, augmented reality, media art, and human interface.

Please visit S-face website for details!

There are more articles and video of Yasuaki Kakehi.

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