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Associate Professor

[TITLE]

Using information systems to support intellectual environments

[MAIN BODY]

Bolstering creativity with information systems

My basic research seeks to create useful things based on information systems. In my research, I'm trying to determine what kind of technology will further creative activity from a human-oriented viewpoint. There are many things that computers cannot help with, at least not at present—not just mental images, which are often indistinct, but also things like scenery viewed and sounds and conversations heard. Unfortunately, these things fade from memory unless they are recorded. I think the ability to retain this everyday information would help further creativity for lots of people. My research focuses on fundamental technologies that can be used to convert this information into various digital formats like images and video and audio data, then store this information to enable effective use.

Creating an environment filled with attractive culture and art

I'm currently working on fundamental technologies involving the use of intellectual assets like cultural and art objects. The results of this research could, for example, propose a means to utilize cultural content by providing basic information on cultural objects like their histories and find sites and by linking explanatory notes written by various people from their perspectives to the objects and terms. Specifically, I'm using the image data of cultural properties of the Tokyo National Museum to research and develop a learning system that

utilizes cultural content for education. The key to successful development of this system is how to reconstruct specialists' information as the kind of information needed by children and how to realize effective interaction between children and the system. The system I've created allows users to zoom in on an image of a clay figure or clay pot to see the surface pattern in detail, to examine the object from various angles, and to search for shared characteristics of various objects by categorizing them by era or find site. This lets children find their own theme for study, based on their own interests. In an experimental class involving sixth graders, the students reacted very positively to this learning system.

Using a knowledge archive

Before the project described above, I was involved in research on archiving the knowledge of artisans. I collected videos of lacquer workers describing their techniques and their passion for their work in interview-style conversations and created an archive. Video communicates a liveliness in conversations and gestures that help spark interest in their work. Then I proposed an information infrastructure that could make use of this video content. By disseminating this method to museums and art galleries across the nation, I'd like to propose an information environment that gives people access to culture and art anytime and anywhere, while also allowing people to reverse this process to contribute information to these cultural centers.

(Interviewed and summarized by Keiko Zaibe)