

FOREWORD

Computers are marvels of human invention and have played an important role in helping human beings redefine the cultural meaning of being human. This redefinition has great social and economic implications. A number of articles in this issue highlight these implications.

The article, by Chai Kiat Yeo, Siu Cheung Hui, Ing Yann Soon, all of Nanyang Technological University in Singapore, examines how computer technology will continue to transform the way human beings communicate with each other. Thus far, most computer communications have been text-based but in the coming years the common modes of communication will expand to include not only audio and video but the use of whiteboards, file sharing, and cooperative web browsing and filling out of forms. This complex mix of communications will place special demands on, for example, corporate call centers; in this article the authors present a browser-based architecture that will allow a full flexibility of communications.

O.C. Akinyokun and T.N. Anyiam, of the Federal Institute of Technology in Akure Nigeria, are also interested in cooperation, but in their case they are interested in the enhancement of the ability of the joining of unstructured human expertise with the more structured knowledge that can be easily represented in computer systems. Such enhancement would, for example, be invaluable in areas of complex information such as weather-prediction, which is the specific area of focus of their research. They describe the system and its functioning as a working system in Lagos, Nigeria.

Educational multimedia is the focus of the article by Li-Yeh Chuang, of the I-Shou University, Cheng-Huei Yang, of the National Cheng Kung University, and Cheng-Hong Yang, of the National Kaohsiung Institute of Technology. They present a multimedia life science unit for 10 to 14 year old students, that asks the basic questions of life in words, images, sounds, animations, and virtual simulations. Again, this makes possible a cooperative endeavor between the software and the teacher; here it is one that has great potential for enriching the learning experience.

Despite all of the advances of computers, there are many jobs that can only be accomplished by human beings, with their particular physical and mental skills and attributes. Computer-based project management, however, can play an important role in allocating human resources to maximize the efficiency of their use. Raymond Ho-Leung Tsoi of Griffith University studies the important question of how to prioritize human resource substitutions, using the Analytic Hierarchy Process.

Finally, Long-Chin Lin, Jau-Woie Chang, and Leii H. Chang of the Industrial Technology Research Institute of Hsinchu Taiwan, Chih-Hung Tsai of the Ta Hwa Institute of Technology, and Rong-Kwei Li of the National Chiao Tung University, discuss a system that makes the process of distributing the IC circuits that are responsible for all these advances with greater efficiency. Their computerized system helps mechanize the packaging of the circuits, allowing them to be distributed to manufacturers in as little time as possible.

Prof. Dr. Srisakdi Charmonman
Editor-in-Chief