

Opening Address

Tadashi Sekizawa
President
ICOT



Ladies and gentlemen, distinguished guests, and fellow members, good morning.

As president of ICOT, I wish to thank all of you for gathering here today. I realize that many of you have traveled far from countries around the world and from various parts of Japan to attend this International Conference on Fifth Generation Computer Systems 1992. I also would like to extend my heartfelt gratitude to the eminent personalities from various circles who have honored us with their presence today, among them are Mr. Watanabe, Minister of International Trade and Industry (MITI), and Mr. Kumano, Director General of MITI's Machinery and Information Industries Bureau.

I recall that it was in October 1981 that research themes and plans aimed at the realization of a fifth generation computer in Japan were announced after three years of prudent preparations and preliminary discussions. The International Conference on Fifth Generation Computer Systems 1981 was also held in that month.

On the strength of this first international conference, the 10-year Fifth Generation Computer Systems project was initiated by MITI in April 1982, with generous and enthusiastic support from government, academia and industry. ICOT was commissioned to play a central role in promoting the project.

In the initial three-year stage of the project, which began in 1982, efforts were focused on the

research and development of basic technology, and the results were presented at the International Conference on Fifth Generation Computer System 1984. This was followed by the intermediate four-year stage of the project which began in 1985. In this intermediate stage, development efforts focused on subsystem development, the results of which were announced at the International Conference on Fifth Generation Computer Systems 1988. FGCS'92 is, therefore, the fourth such conference and coincides with the last year of the project. It has been organized to present the results of the final stage of research and development into creation of a fifth generation computer prototype system.

Establishment of new and advanced hardware and software technology to implement large-scale inference and parallel processing has been the core objective of the project. Under the project, newly developed hardware and software technology has already been systematized with a high level of integrity as fifth generation computer technology, and has also been integrated into a prototype system that can actually be applied to practical problems.

On the hardware end, we have completed a prototype parallel inference machine incorporating 1,000 processors as initially planned. The software developed for the parallel inference machine includes a parallel operating system and a knowledge-base management system. In addition,

we have developed a knowledge programming system for theorem-proving, constraint processing and natural language processing, experimental application systems, and many other tools. All these research results will be introduced at the plenary and ICOT sessions of this conference. We have 20 separate demonstrations planned so that all participants can observe the results of our research themselves.

The ICOT research center is staffed by about 100 highly capable researchers on loan from both government research laboratories and the corporate research laboratories of computer manufacturers. A total of 210 young researchers have taken part in the project since the center was established. Research and development under the project has been pushed forward with the cooperation of numerous researchers from related industries and organizations under the guidance of an advisory group made up of specialists from the government, academic and industrial sectors.

ICOT has vigorously promoted collaborative research with overseas institutes to strengthen the activities of its research center as an open research organization. We have provided opportunities and arenas for joint presentations and discussions with overseas researchers. We have also organized workshops at regular intervals with research organizations in developed nations, including the United States, France, Sweden, Italy and the U.K. We have made consistent efforts to promote collaborative research plans with five well-known research organizations and universities in Europe

and America.

ICOT's research and development under the project, performed under commission to MITI, has been financed by the government over the ten years of the project to the tune of about 54 billion yen. About 8.2 billion yen was appropriated for the initial three-year stage of the project, 21.6 billion yen for the intermediate four-year stage, and 24.2 billion for the final four-year stage.

At this conference, we will present the results of the final stage of research, and will also provide a forum for presentations and exchange of opinions by researchers from Japan and abroad.

On this occasion, I would like to express my heartfelt thanks to Professor Hidehiko Tanaka, Conference Chairperson, professor Hozumi Tanaka, Program Chairperson, and all the other persons on the Organizing and other committees who devoted themselves unreservedly to the planning and preparations for this conference. I also feel deeply indebted to many other persons affiliated with related industries and organizations for their generous support.

It is my ardent desire that, through the cooperation and lively exchange of information by all participants, this international conference will prove highly beneficial to all individuals and organizations concerned. I hope that it will, also, lead to further steady advances in the development of new computer technology and contribute greatly to the progress of information processing technology in all countries of the world.

Thank you very much.