

MESSAGE FROM THE CHAIRPERSON OF FGCS'92

On behalf of the Organizing Committee, it is my great pleasure to welcome you to the International Conference on Fifth Generation Computer Systems 1992.

The Fifth Generation Computer Systems (FGCS) project was started in 1982 by the initiative of the late Professor Tohru Moto-Oka with the purpose of making a revolutionary new type of computers oriented to knowledge processing in the 1990s. After completing the initial and intermediate stages of research and development, we are now at the final point of our ten-year project and are rapidly approaching the completion of prototype Fifth Generation Computer Systems.

The research goals of the FGCS project were challenging, but we expect to meet most of them. We have developed a new paradigm of knowledge processing including the parallel logic language, KL1, and the parallel inference machine, PIM.

When we look back upon these ten years, we can find many research areas in knowledge processing related to this project, such as logic programming, parallel processing, natural language processing, and machine learning. Furthermore, there emerged many new applications of knowledge processing, such as legal reasoning and genetic information processing.

I believe that this new world of information processing will grow more and more in the future. When very large knowledge bases including common sense knowledge come out in full scale and are widely used, the knowledge processing paradigm will show its real power and will give us great rewards. From now on, we can enjoy fifth generation computer technology in many fields.

Following the same objective of creating such a new paradigm, there has been intense international collaboration, such as joint workshops with France, Italy, Sweden, the U.K., and the U.S.A., and joint research with U.S.A. and Swedish institutes on parallel processing applications.

Against this background, ICOT hosts the International Conference on Fifth Generation Computer Systems 1992 (FGCS'92). This is the last in a series of FGCS conferences; previous conferences were held in 1981, 1984 and 1988. The purpose of the conference is to present the final results of the FGCS project, as well as to promote the exchange of new ideas in the fields of knowledge processing, logic programming, and parallel processing.

FGCS'92 will take place over five days. The first two days will be devoted to the presentation of the latest results of the FGCS

project, and will include invited lectures by leading researchers. The remaining three days will be devoted to technical sessions for invited and submitted papers, the presentation of the results of detailed research done at ICOT, and panel discussions.

Professor D. Bjørner from the United Nations University, Professor J.A. Robinson from Syracuse University, and Professor C.A.R. Hoare from Oxford University kindly accepted our offer to give invited lectures.

Professor R. Kowalski from Imperial College is the chairperson of the plenary panel session on "A springboard for information processing in the 21st century." Professor Hajime Karatsu from Tokai University accepted our invitation to give a banquet speech.

During the conference, there will be demonstrations of the research results from the ten-year FGCS project. The Parallel Inference Machines and many kinds of parallel application programs will be highlighted to show the feasibility of the machines.

I hope that this conference will be a nice place to present all of the research results in this field up to this time, confirm the milestones, and propose a future direction for the research, development and applications of the fifth generation computers through vigorous discussions among attendees from all over the world. I hope all of the attendees will return to their own countries with great expectations in minds and feel that a new era of computer science has opened in terms of fifth generation computer systems.

Moreover, I wish that the friendship and frank cooperation among researchers from around the world, brewed in the process of fifth generation computer systems research, will grow and widen so that this small but strong relationship can help promote international collaboration for the brilliant future of mankind.

Hidehiko Tanaka
Conference Chairperson