Preface

It has been 10 years since the Fifth Generation Computer Systems (FGCS) project started in 1982. Throughout this period, we have been conducting research and development on hardware and software technologies, and basic theories for new computer systems, combining highly parallel processing and knowledge information processing using logic programming. Furthermore, we aimed at the development of a prototype of FGCS integrating hardware and software technologies to be able to objectively evaluate these newly developed technologies. The research and development contained many technical problems that were difficult to solve. However, rapid growth in the research fields of logic programming and knowledge information processing produced many distinguished researchers. Through cooperative research with these researchers, we were able to solve most of these problems and complete the prototype system.

At the FGCS'92 conference, we successfully demonstrated the major achievements of the project as well as presenting papers on many important research results. Furthermore, we introduced a new scheme that enables us to disclose the software developed in the project free of charge to contribute to the advancement of computer science and technology in the world. Taking this opportunity, we intended to hold a project evaluation workshop inviting leading researchers in the fields related to FGCS technologies to ask them to evaluate the software and hardware technologies and scientific and political contributions of the project.

In the workshop, we asked those of the invited researchers from overseas who have conducted collaborative research work to present their opinions on the evaluation of this project. This was followed by discussions with other workshop participants. This proceedings consists of the program of this workshop, which includes an explanation of the aim of the workshop and a list of participants, evaluation reports containing various opinions written by the researchers who made presentations at the workshop, and some additional papers contributed after the workshop.

Their opinions mentioned various aspects of the project; the impact of this project on government sponsored projects in many countries, contributions to computer science and technology, evaluation of technical achievements in logic programming and parallel processing, future directions of knowledge processing applications, disclosure of developed software, future role and extension of ICOT, and many others.

The various opinions summarized in this proceedings are not limited to the technical aspects of FGCS related technologies but extend to political aspects such as what Japanese national projects must do in connection with world research and development on advanced technologies. Thus, they indicate important conditions that Japan must consider in carrying out advanced research and development. All these opinions are very constructive and helpful. We, the organizers of this workshop, deeply thank the researchers who presented or joined the discussions at the workshop.

It is our sincere hope that this proceedings will serve as a valuable reference for the researchers, project managers, and government people who are interested in the evaluation of the FGCS project from technical, academic and political aspects and may be engaged in advanced research and development in the future.

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