Preface
Special Issue on
Information Technologies
in the Internet Era

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The 20th century was the "century of science and technology." Throughout the 20th century, again and again, we the human race, have realized the unrealizable to better our lives. Never before have we experienced such radical changes in such a short time. The new century will be a period of extremely rapid growth in the economy and in the rate of consumption, and, consequently, social strains and environmental problems will increase. A major challenge, therefore, in the 21st century will be to achieve even more growth and yet make our technologies and systems more harmonious and "world friendly."

Information technology (IT) has evolved through several stages, from military technology to technology for industries and social life. Now, we have computers in our homes that are interconnected via networks, forming a huge computer system that meets our daily needs. We can expect that the future progress of IT will bring more and more innovations to further enrich our lives.

The Internet is now evolving into a new form: the broadband Internet. The word "broadband" here does not simply mean high-speed communications but also implies changes in the application environment, for example, two-way communications, permanent connections, and mobile applications.

The broadband communication system makes it easy for users to manipulate images, sounds, and text, but technically it requires very high-level functions and equipment performance. To meet these requirements, performance must be enhanced from 10 to 100 times above the current levels in every field of communication technology. For example, the transmission rates in backbone networks must be increased from the current gigabits per second to terabits per second; the transmission rates in access networks from kilobits per second to megabits per

second; the clock frequencies of processors from megahertz to gigahertz; and the capacities of storage devices from gigabytes to petabytes.

The Fujitsu Group will place a very strong emphasis on developing and marketing advanced technologies that meet the requirements described above. We will also be very active in developing and marketing XML (eXtensible Markup Language), agent technologies, and Internet Protocol version 6 (IPv6), which are the basic software technologies for making full use of an enormous worldwide computer network such as the Internet. Also, through the research and development of selected goals, we intend to become the leading producer of advanced electronic devices to support these technologies.

As we face the new age of IT, the Fujitsu Group has the following message for the world: "The Possibilities Are Infinite." Along with the obvious interpretation of this message, it is also a statement of our determination to explore the future with our customers. We in the Fujitsu Group are now taking our first steps into the 21st century with a strong will to build a bright and exciting world.