# Column 4

## "K computer" achieved through Fujitsu's DNA for advanced computer development

Supercomputers have the ability to carry out large-scale calculations and computer simulations that cannot be performed on standard business systems. For example, computer simulations for automotive design have enabled engineers to optimize driver and passenger safety in car crashes. This has been achieved without experimenting with actual vehicles, saving time and reducing costs. Supercomputer based simulations are expected to further contribute to our daily lives through drug discovery, sophisticated climate change modeling, better city planning against natural disasters, and early disaster warning.

Japan's leading research institute RIKEN chose Fujitsu to develop one of the world's most powerful supercomputers, the K computer. The "K" comes from the Japanese word "Kei" which means ten peta or $10^{16}$.

Fujitsu's involvement in computer development dates back to the creation of the FACOM 100 60 years ago. The FACOM 128B was then developed in 1959 as a subsequent model with five times the operation capacity. This machine is considered one of the world's oldest computers still in working condition, listed as information processing technology heritage, it can be found at the Numazu Factory. Interestingly, our computers back then were already equipped with mechanisms required in today's mission critical systems. For example, the "retry function*" is one of them. Our engineers' commitment to responding to the needs of our customers continues to be pursued to this very day as Fujitsu's fundamental spirit in technology development.

* The retry function repeats a certain operation when an error is detected and the newest version of this function is still used in Fujitsu's latest mainframes and SPARC64 processors.