

control system has been successfully developed with a new single-chip micro-computer. By adding a knock control function to the conventional system, the performance and the driveability of the vehicles have been considerably improved. With the use of this microcomputer, the number of LSIs has been reduced, improving the reliability of the ECU without enlarging it. The new micro-computer is flexible and sophisticated, quite suitable for automobiles, and is adaptable to various kinds of automotive systems.

In the future, it will be necessary to design a CPU in serial form and to empty the latest semiconductor technology in order to realize miniaturization, cost reduction, and an improvement in the reliability of the ECU. To facilitate the realization of such an ECU, it will be mandatory for the automobile manufacturer and parts vendors to co-operate more closely in the future.

REFERENCE

H. Ono, et al., "Toyota's New Microprocessor based Engine and Transmission Control System" SAE830423 March 1983