

Applied Telecommunication System [FATEC] Using Microprocessor for Versatile Data Acquisition and Supervisory Control



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[ABSTRACT]

It is required recently for data acquisition and supervisory system to provide transparent transmission of bit and message informations by packet or non-packet transmission method, and to provide various kinds of interface to I/O.

In order to fulfill these requirements we have developed the new system called FATEC(Fujitsu Applied Telecommunication System) using microprocessor and bus technology.

FATEC has various feature as follows.

- 1) we have employed multi-microprocessor configuration by deviding task into communication control, data processing and I/O control, to overcome the limit of processing speed of single chip.
And stored program method has made it possible to response easily to variation of data transmission format, various kinds and numbers of I/O which include digital, analog and pulse up to 256.
- 2) We have employed bus system, which is constructed with analogue bus, communication control bus and I/O control bus in addition to microprocessor bus. This bus is made of about 80 signal lines, operates in 2MHz clock, and is wired on a multi-layer printed board. This FATEC's unique bus system has made it possible to realize complete building block module method, and to utilize a wide variety of applications.
- 3) FATEC can transmit, exchange and convert data, and can perform the node function of complex network such as hierarchy or mesh.
- 4) FATEC's real time operating system is provided for multiprocessing and various control functions, so that under this operating system the configuration can be freely selected according to the application system by combining various software package.
- 5) FATEC has abundant interface to sensors by digital, analogue or pulse signal, and man-machine interface to CRT, key board and graphic panel.

FATEC is employed for applied telecommunication system such as electric power control system, water management system and city disaster prevention system, etc.