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Under VM/CMS, even the IBM 4341 super-mini can support as many as 200 interactive users at a time.

**VM/CMS Easily Learned**

One user of VM/CMS on a 4341 is the University of Pennsylvania, where Roy Marshall directs the Physics Department Computer Facility. “Users learn it very easily,” Marshall says. “They do simple things the first day. They flow with the problem-solving: A physicist does physics, not computer science.”

“The editor is the most powerful I have ever used,” says Dr. Richard Steinberg, who is pursuing a proton decay experiment. “I can get any file-data, programs, text— with two keystrokes. With the prompting system, I can enter a big job and know it will run. I won’t find out the next morning that there was a job-entry error.”

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The IBM line of upwardly compatible computers extends from the small 4331 to a giant system. The 4341 is a true super-mini in size and cost, yet it has every feature that makes its larger counterparts ideally suited as engineering and scientific systems: for example, the 64-bit data paths and the rich set of 51 floating-point instructions.

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IBM’s largest computer is the 3081. With its processing speed, memory size, and the speed and number of its I/O channels, the 3081 is designed to handle the massive problems presented by such disciplines as elementary particle physics.

At the Stanford Linear Accelerator Center (SLAC) near Palo Alto, a 3081 reduces a flood of recorded sensor data.

“CPU power is critical to us, in terms of saving the scientist’s time,” says Charles Dickens, director of computing services at SLAC. “Under VM, he can look at intermediate results and—if necessary—change the physical experiment or the calculation.

“And the ability to move sensor data rapidly from our instrument tapes is vital. We need
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The IBM 3033, upgradable over a 4:1 range of computing power, covers the span from the super-mini to IBM's biggest.

At Western Geophysical Company, nine 3033 systems with attached IBM array processors are absorbing a torrent of data from geophysical exploration all over the world. From a jumble of seismic echoes, they derive the hidden contours of underground rock layers.

At Western's headquarters in Houston, senior vice president Carl H. Savit explains: "To improve the signal-to-noise ratio and arrange the data for the required series of calculations, we perform massive data sorts. The rapid channel rates of the 3033 are essential to us.

“Our product is data,” Savit adds. “The computer is our production machinery. We depend critically on continuous operation and quick response. We need close support from our computer vendor, and we get it from IBM.”

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