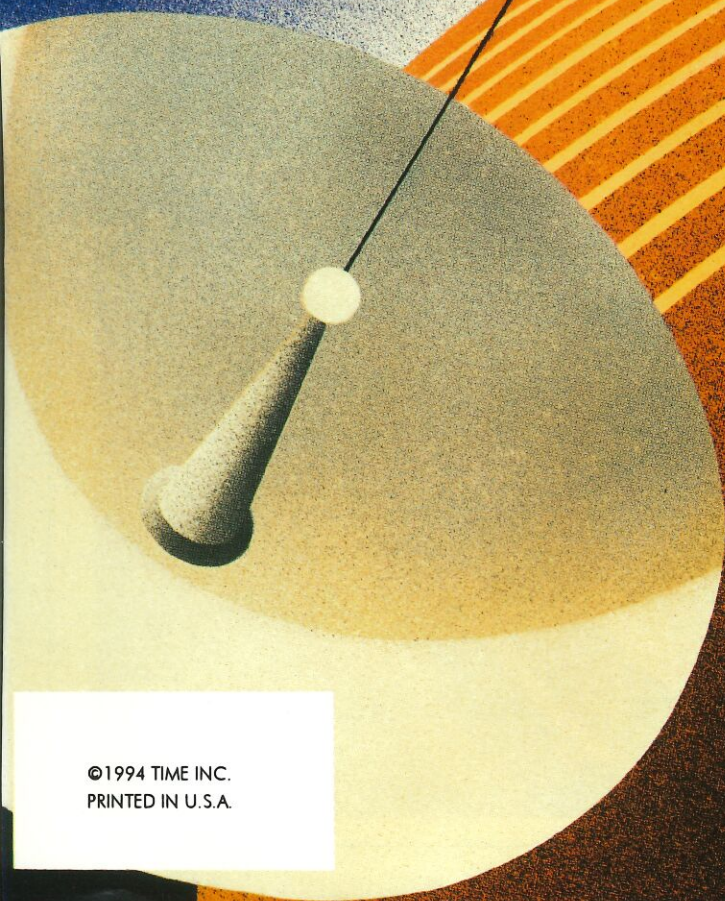


# FORTUNE

Guide To The

# NEW ECONOMY



■ A new core infrastructure

■ Services, not goods

■ The productivity payoff

## TECHNOLOGY TO WATCH

BY ALISON SPROUT

### BLOOD TEST WHILE YOU WAIT

**A fast, portable analyzing machine, originally intended for astronauts in space, may soon find a place in your doctor's office.**

Anyone who has had a routine physical knows getting a blood test is a pain—and not just because of the needle. First you pray that the technician finds your vein quickly. You watch (or look away squeamishly) as he fills two or three entire test tubes with your precious bodily fluid. Next you wait at least a day for results from the lab. All that may change with the advent of a desktop tester that produces results in about 12 minutes and requires only a finger prick's worth of blood.

The Piccolo Point-of-Care Whole Blood Analyzer by

Abaxis, of Sunnyvale, California, uses standard test chemicals that Abaxis freeze-dries in tiny beads. It seals these in chambers along the rim of a molded plastic disk, or rotor.



#### QUICK DRAW

**A technician pricks your finger and dabs blood onto a disk; chambers on its edge contain chemicals for rapid testing.**

The technician deposits your blood in a well at the rotor's center and pops the disk into the Piccolo, which spins it at about 4,000 rpm. Centrifugal force separates plasma from blood cells and forces precise quantities of it through thin tubes to the chambers. As the plasma and chemicals react, a spectrophotometer reads changes in color and the machine prints out results. Getting data

right away lets the doctor prescribe medicine with no need for a follow-up visit or call to discuss the test.

The FDA has approved the Piccolo and a version of the rotor containing five tests. Abaxis plans to offer combinations of about 50 tests; it will charge \$8,000 for the analyzer and \$8 to \$20 for each disposable rotor, making Piccolo testing about as expensive as that done by a large lab.

Piccolo is based on U.S. space program efforts to design a blood analyzer for astronauts to use in space. Funding ran out after the *Challenger* disaster in 1986, and Abaxis founders Gary Stroy and Vladimir Ostoich snapped up exclusive rights in 1988. The Piccolo weighs just 15 pounds, takes up as much room as an oversize toaster, and can operate on a 12-volt battery, making blood tests possible in ambulances, field hospitals, and primitive countries. Nor has Abaxis forgotten space: France's space agency hopes to test the analyzer on a NASA shuttle flight next year. **F**

