

room use of computers by lowering rates for educational use. Others have proposed that computer use be included with library maintenance and university administrative expenses as an overhead item. Thus computer users would be charged a general indirect fee rather than a direct charge for the specific computer services used. Both of these proposals, however, would require a revision of government accounting policy.

The problem of computer time going unused was particularly acute at Stanford until 1967, said Edward A. Feigenbaum, former director of the computation center there. Then a committee of federal-agency representatives and the university adopted a pilot agreement that changed the source of the center's income from fees determined by average costs to prices that reflect supply and demand. Instead of simply averaging the total cost of computer operations over a year, the Stanford system "identifies many components of computer service," Feigenbaum said. A computer user first pays for a particular combination of computer hardware and processing speed, then he decides what sort of priority he can afford. If he pays for a high priority, his program will run ahead of lower-priority programs. For example, a computer programmer who wants to run through four debugging phases during a day would pay for a high priority to get quick results and make best use of his time, whereas a student doing a term paper would pay for a lower priority to conserve his financial resources.

What to do about idle time? "When the demand slackens off, you just drop your prices," said Feigenbaum. A computer program run on Friday afternoon when demand is heavy would carry a \$2.50 surcharge, while the same program, with the same priority rating and processing speed, might receive a 50-percent discount if run early on Saturday morning. "It's a utility concept," said Stanford's controller, Kenneth D. Creighton. Computer programmers, like electricity users, "get their own special rate when use is low at 2 a.m."

Presumably a student with limited funds for computer expenses would try to save money by running a low-priority program during off-hours. But since other users could request the same type of service at the same rate, there is basically no question of rate discrimination. The rates for some types of service at Stanford have changed quarterly or even monthly to reflect fluctuations in demand, and some ad-

ministrators hope to experiment with more dynamic pricing to determine how often prices for campus computer service should change.

Other universities have adopted priority systems but Stanford's flexible pricing plan remains something of an experimental model. Creighton sees two general transitions developing in computer accounting. One is from "costing" over a single year to costing over a longer time period, and the other is from costing to pricing.

Government negotiators have often interpreted the Bureau of the Budget's guidelines liberally, especially in hardship cases, but the Bureau last revised them in 1965—almost a generation ago on a computer time scale. It may issue a new revision as early as November.

As the fall semester began, directors of university computer centers appeared concerned over federal budget cuts. Accustomed to rapid expansion and limited academic funds, they are no strangers to financial headaches, but the cuts have compounded their problems this year.—MARK W. OBERLE

APPOINTMENTS



M. R. Schroeder



J. T. Wilson

Manfred R. Schroeder, director, Acoustics, Speech and Mechanics Research Laboratory, Bell Telephone Laboratories, to director, III. Physics Institute, University of Goettingen, Germany. . . . **John T. Wilson**, dean of faculties, University of Chicago, has been appointed provost of the university. . . . **David Pramer**, chairman, department of microbiology and biochemistry, Rutgers University, to director, biological sciences at the university. . . . **Richard D. Moore**, professor of pathology, Case Western Reserve University School of Medicine, to head, pathology department, University of Oregon Medical School. . . . **Rolla B. Hill, Jr.**, professor of pathology, University of Colorado, to chairman, department of pathology, State University of New

York Upstate Medical Center. . . . **Marvin W. Scott**, acting chairman, natural sciences department, Longwood College, appointed chairman. . . . **George Z. Williams**, chief, clinical pathology department, clinical center, NIH, to director, Research Institute of Laboratory Medicine, Institute of Medical Sciences, San Francisco. . . . **Bernard Sigel**, professor of surgery, Woman's Medical College, Pa., to dean of the college. . . . **Emanuel D. Rudolph**, professor of botany, Ohio State University, to director, Institute of Polar Studies at the university; and **Colin B. Bull**, former director of the Institute, to chairman, geology department at the university. . . . **Sydney L. W. Mellen**, deputy director, European Office of the Communications Satellite Corporation, elevated to director. . . . **Frank Farner**, president of Federal City College, to director of program development, American Association of State Colleges and Universities. . . . **Robert E. McDermott**, associate dean, Graduate School, Pennsylvania State University, to dean, Graduate School, University of Arkansas. . . . **Robert E. Van Atta**, professor of chemistry, Southern Illinois University, to head, chemistry department, Ball State University. . . . **Karl G. Lark**, professor of biology, Kansas State University, to chairman, biology department, University of Utah. . . . **Philip I. Marcus**, professor of microbiology and immunology, Albert Einstein College of Medicine, Yeshiva University, to head, microbiology section, University of Connecticut. . . . **Edmund J. McTernan**, chairman, allied medical sciences division, Northeastern University, to dean, School of Allied Health Professions, State University of New York, Stony Brook. . . . **Phillip R. Fordyce**, acting dean, College of Education, Florida State University, appointed dean of the college. . . . **Donald B. Johnstone**, chairman, microbiology and biochemistry department, University of Vermont, to dean, Graduate College at the university. . . . **Chung-ming Wong**, senior executive adviser, Astronautics Company, McDonnell Douglas Corporation, to director, Office of Saline Water, U.S. Interior Department. . . . **C. Eugene Sunderlin**, special assistant to the president, National Academy of Sciences, to vice president of Rockefeller University. . . . **Robert S. Sullivant**, chairman of the political science department, University of Missouri, St. Louis, to dean, Graduate School at the university.