staffers noted that researchers have been struggling to modify their plans to include suggestions from expert advisers, as the IOM group had urged them to do earlier.

During last week's meeting, IOM panel members said they were not sure how they can evaluate CDC's plans—and produce a peer-reviewed report—before the end of the year, as Congress has requested. They urged the CDC scientists to nail down their research agenda before this group meets to put its views in writing at a closed meeting in March.

–ELIOT MARSHALL

JAPAN

Libraries Seek Ways to Hold Down Costs

TOKYO—Japan's university libraries are losing the battle to keep scientific journals on their shelves. Soaring subscription prices, an unfavorable exchange rate, and a decentralized approach to collections have led to a dramatic reduction in the number of available titles at the country's 99 national universities. But library officials haven't given up the fight. Last week they met here to discuss taking advantage of cheaper online access and using their joint bargaining power to bring down subscription costs.

Japan's library crisis parallels the problems facing U.S. and European institutions (*Science*, 30 October 1998, p. 853). Although the government has steadily boosted spending on science and technology throughout the 1990s, most of the money has gone into competitive grants. The country's two 5-year science plans, for example, contained "no mention of scientific and scholarly communication," says Syun Tutiya, a professor of information sciences and director of the library at Chiba University, east of Tokyo, who helped organize the 9 January symposium. The problem has been exacerbated by a steady decline in the value of the yen against the dollar and most European currencies, making foreign periodicals ever more expensive. As a result, the number of titles received by the national libraries has dropped by half since peaking at 40,000 in 1989.

But Japan's libraries also face a host of institutional challenges. Many journals are ordered not by the library but by individual professors, using research funds. And those subscriptions may be canceled at any time. The result can be both multiple subscriptions and sudden gaps in a library's collection. In addition, many individual departments have their own libraries, which typically are not accessible by outsiders. All these factors, says Tutiya, means "we really don't know the extent of our journals crisis."

Even so, there is consensus that the biggest challenge is rising subscription prices. Individual universities traditionally have purchased material through subscription agents and have had little or no direct contact with publishers. However, last year a consortium of national university libraries negotiated discounts and package deals with Europe-based Reed Elsevier and several other major academic publishers. Although nondisclosure clauses prevent Tutiya from providing details, he acknowledges that "it is a discount."

Library officials hope to extend the consortium approach to online journal access. An advisory panel to the Ministry of Education, Culture, Sports, Science, and Technology is finalizing recommendations likely to lead to funding later this year for site licenses that provide online access to journals. The idea is to negotiate agreements with journal publishers involving faculty, staff, and students at some 70 national universities, says Jun Adachi, a member of the working group drafting the recommendations and an information scientist at the National Institute for Informatics (NII), which hosted last week's symposium.

Meeting participants also heard from Alison Buckholtz, associate enterprise director for the Scholarly Publishing and Academic Resources Coalition (SPARC), a library advocacy group based in Washington, D.C. "There has been a lot of interest in our ideas for online journals and alternatives to commercial journal publications," says Buckholtz. NII is expected to play a major role in advocating similar reforms, because Japan's national university libraries are not allowed to spend money to join an advocacy organization such as SPARC.

Elusive target. "We don't know the extent of our crisis," says Syun Tutiya of Chiba University.

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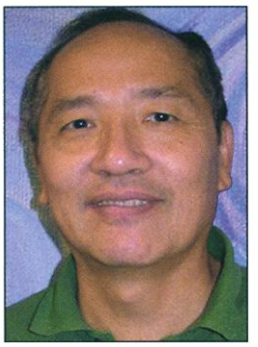
Tutiya sees last week's meeting as the first step in getting libraries to develop a strategy for coping with the changes sweeping through academic publishing. Such a plan, he and others say, would be an essential ingredient in convincing government officials that Japanese academic libraries need help.

–DENNIS NORMILE

TAIWAN

Frank Shu Named University Head

Frank Shu, an astronomer at the University of California, Berkeley, is coming home—for the first time. Next month Shu becomes president of Taiwan's National Tsinghua University, Hsinchu, adding to the list of prominent ethnic Chinese scientists from abroad who hope to build Taiwan into a scientific and technological powerhouse. "His coming to Taiwan is quite a coup for the academic community here," says K. Y. (Fred) Lo, director of Academia Sinica's Institute of Astronomy and Astrophysics in Taipei.



Impact. Frank Shu hopes to "make a difference" in Taiwan.

Shu, 59, was born in the southern China city of Kunming but as a child moved to the United States with his family. Trained at the Massachusetts Institute of Technology and Harvard University, he joined the Berkeley faculty in 1973 and in 1998 was named one of a handful of University Professors. Although Shu has never lived in Taiwan, he will be following in the footsteps of his father, Shien-siu, who led the university in the early 1970s and later helped create Hsinchu Science Park, Taiwan's "Silicon Valley." He is also emulating Lee Yuan-tseh, a Taiwan native son and 1986 chemistry Nobelist who left Berkeley in 1994 to become head of Academia Sinica, and dozens of prominent scientists whom Lee has recruited.

Astronomers praise Shu's theoretical work on the structure of spiral galaxies and, more recently, on star formation. "He has played a leading role in making star formation a major field," says Anneila Sargent, a radio astronomer at the California Institute of Technology in Pasadena and current president of the American Astronomical Society, which Shu headed in 1995.

Shu says he decided to take the job "because I realized I can make a bigger difference in Taiwan than by remaining in the United States." But he admits he faces some significant challenges in raising the quality of Taiwan's universities. In addition to tapping private sources to supplement government funding, Shu also hopes to change a culture in which resources are shared equally to one in which academic stars receive the support they need to shine. "There is a growing understanding [among government officials] that science at the forefront is an elitist affair," he says.

–DENNIS NORMILE