APS DEVELOPS SYSTEM TO MANAGE MEMBERSHIP DATA SERVICES

A decision was made at the APS Council meeting in Crystal City, Virginia, this January to allocate funds to purchase computer hardware and software and hire staff to enable the society to manage its own membership database. This service has been handled up to now by the American Institute of Physics, along with fulfillment of journal subscriptions. Projections indicate that when the new APS system is running, per-record costs may rise slightly but interaction, reporting capacity and services to all users will greatly improve. The council felt strongly that increased service and accountability are required by APS.

The current AIP database, which serves APS and most of the other AIP member societies, is on a Univac computer dating from 1972. It employs the batch processing method, which means that data cannot be recalled for several days after being entered. Data on membership in APS divisions, topical groups and sections are kept in a separate computer, which also batch-processes, because the main file cannot expand to hold information that was not anticipated in 1972. This auxiliary computer is not networked to the main computer, and some data transfer must be done by hand.

Well aware of problems in its system, AIP first undertook to solve them in 1982 with the help of a software development firm. The firm was commissioned to design and deliver a replacement for the aging AIP system. The work fell further and further behind schedule (and ran more and more over budget). In 1987, with the system still far from complete, the contract with the firm was canceled. Because of the desire to meet the diverse specialized needs of every society, the system design became exceedingly complex—so complex, according to Timothy Ingoldsby, AIP's new director of information technology, that no one completely understood it. Under Ingoldsby's leadership, AIP is working now to develop a system in-house. The subscription fulfillment portion of the system is targeted for operation by 1 September 1988, and the enhanced database capability by spring 1989.

Last fall, APS Executive Secretary William W. Havens Jr requested a proposal for a database system from Peggy Judd and her staff of data processing professionals at the APS liaison office in Woodbury, Long Island. As manager of the APS Woodbury office, Judd has been involved in the computerization of the society's publications and editorial systems for the last 11 years and is well acquainted with the society's structure and needs.

Working with Christopher LaGrego and William Rushka of her technical staff, Judd prepared a proposal detailing hardware and software options, staffing requirements, development phases and estimated costs of all aspects of a membership database system. Judd sought technical advice from Brian Kernighan, a principal programmer and developer of the Unix operating system, and Peter Weinberger, a database expert, both of AT&T Bell Laboratories. The proposal received favorable reviews from Jan Herbst of the condensed matter division, Kate Kirby of the division of atomic, molecular and optical physics, and Sidney Fernbach of the computational physics topical group.

Judd presented the proposal to the APS Council in January and received immediate approval and allocation of $220 000 for capital expenses. Under the proposal, APS will continue to rely on AIP for subscription fulfillment but will create its own system for membership data services. The estimated annual operating cost for the APS membership database system is $200 000. APS has been paying AIP a comparable amount for both database services and fulfillment of journal subscriptions.

Judd selected Sequent hardware and Unify relational database management software, enhanced by a powerful fourth-generation programming language. Like APS publication operations, the membership system will run under the Unix operating system. A membership database developed and maintained in-house will also provide APS with a high degree of customization and integration.

When the new APS system is fully operational, it is hoped that staff will be able to filter and retrieve the data with a freedom and ease they have never had before. —AH ■

Physics Alliance Workshop

The first regional workshop sponsored by the Local Physics Alliances project will be held 29–30 April at North Carolina State University in Raleigh, North Carolina. The project promotes working alliances between university and high-school faculty to improve education at the secondary level. The project is funded by NSF and sponsored by the College–High School Interaction Committee, a joint committee of APS and the American Association of Physics Teachers (see PHYSICS TODAY, October 1987, page 107).

Sixty to seventy high-school and college physics teachers will participate in the Raleigh workshop. Classroom demonstration methods will be presented, and physics alliances already in operation will be described by the teachers who formed them. A speaker and a panel discussion will round out the conference. In the next two and a half years, four or five such conferences will be held across the US.

APS will provide modest start-up assistance to alliances formed as a result of the conference and will encourage alliances to share their experiences in a national newsletter and in physics teaching periodicals. For further information contact Charlene Reich, Local Physics Alliances Project Manager, APS Headquarters, 335 East 45 Street, New York NY 10017.