IT’S THE TECH-LITE GENERATION

Many computer science and engineering majors today do not understand the fundamentals of how computers work, and colleges are modifying their curriculum to fill this gap. In the past, engineering majors came to college with experience in taking apart and rebuilding machines. However, today’s engineering students “have never taken a toaster apart, certainly never built a radio,” says Virginia Tech’s Lynn Abbott. David Macaulay, author of How Things Work, attributes the lack of understanding about computer architecture to computers themselves. Making a computer work typically requires pressing the right keys, not tearing the machine apart, Macaulay says. Concerned about this trend, colleges are beginning to offer courses that provide hands-on training. Virginia Tech, for example, requires students in “Intro to Computer Engineering” to build digital circuits. Arizona State University focuses on the design process and testing real designs, while the University of Colorado built a special lab to provide future engineers with hands-on design experience. At the same time, colleges are offering new “tech-lite” courses for nontechnical majors who want to learn some basic technology skills. (InteractiveWeek)

STUDENT AID ON THE WEB

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Information Technology in the News

SECURITY MATTERS

HOPKINS RESEARCHERS TAKE ON COMPUTER-AGE SECURITY ISSUES

Johns Hopkins University is using an anonymous $10 million donation to establish the Information Security Institute, a research center dedicated to computer-security issues. The center will deal with an array of computer-related problems, such as hackers, electronic copyright issues, and the public policy ramifications of making reams of personal information available online to the public. The center will also give a major boost to Baltimore’s efforts to attract high-tech companies with its “Digital Harbor” campaign. Hopkins officials say the center is unique because it will employ fifty researchers representing nearly every discipline in the university. For example, engineering faculty will research potential technical bulwarks against hackers, while musicians from the school’s Peabody Institute will study intellectual property issues relating to online music. The institute will also offer courses to students starting in fall 2001 and a degree program. (Baltimore Sun)

LIBRARIES AROUND THE WORLD TEAM UP FOR NET SERVICE

A group of libraries from around the world began testing the Comprehensive Digital Reference
EDUCAUSE Review
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GEORGETOWN UNIVERSITY: RAzing the FirEwAll

Georgetown University will begin experimenting with replacing its firewall with a virtual private intranet (VPIN) that will authenticate users directly to the network. The VPIN would provide a more scalable, cost-effective, and efficient alternative to the firewall, says Georgetown’s chief IT architect Richard Kogut. Using directory-enabled networking (DEN) and virtual local area networks (VLANS), the VPIN would provide different levels of network access to different types of users. A VLAN groups geographically separate network ports so that they function as a unified physical LAN. Meanwhile, DEN allows users to be dynamically assigned to VLANS based on what type of user they are rather than on their physical port location. Georgetown could create a VPIN by arranging its network into a series of server VLANS and user VLANS. Routing rules would then determine which user VLANS could send traffic to which server VLANS. Thus the VPIN would present users with only the parts of the network that they are allowed to access.

Service, a free service that will help users find information on the Internet by directing inquiries to the appropriate library. The Internet often provides too many search results or questionable information, and the libraries hope to bring a higher quality of information online by providing access to their wealth of research collections and specialized catalogs. A network will route questions to the library best suited to provide an answer, based on the libraries’ expertise, hours of operation, and other considerations. Although the group will initially focus on answering questions in English, the service should eventually accommodate up to twenty languages. The group, which expects to launch its Web site officially by June 2001, has about sixty members, including Yale, Harvard, the National Gallery of Art, the National Library of Australia, and the Duke University Divinity School. (Baltimore Sun)

COUNTRIES BENEFIT FROM DATABASE PROJECT

Officials at the Open Society Institute have made an appeal to the private sector for help in providing countries in transition access to commercial databases. Over the past year the foundation, associated with financier George Soros, has subsidized the cost of accessing six databases offered by EBSCO Publishing so that libraries in thirty-nine developing countries could offer scholars access to that information. Daniela Gondova, a library official in Slovakia, says she cannot imagine what researchers would do without Electronic Information for Libraries Direct. Soros, a Hungarian-born American financier and philanthropist, said, “It’s our most ambitious attempt to date to bridge the gap in access to information—the worrisome ‘digital divide’—between countries in transition and the richer nations.” The director of the project, Michael Kay, says corporations that will ultimately benefit from a tech-savvy society should help sponsor the program. (Chronicle of Higher Education)

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