Allegheny College (Pennsylvania) has 200 machines in public labs with network access, 140 machines on faculty desks with network access, 100 machines in administrative offices with network access, and 20 dial-in lines for students, faculty, and staff.

No charges are levied for any computer services. We assume that the cost should be included in the general fees that we charge, just as access to the library is included in those charges. The only charge we levy is for use of off-campus databases that charge by the search (FirstSearch, for example). We see this as the equivalent of charges for photocopies.

David Anderson
Director, Educational Computing Services
danders@alleg.edu

The University of Tasmania currently does not charge for network access and use. The charges are considered an infrastructure item and are paid centrally. However, this is almost certainly going to change in 1996, due to the massive growth in usage and corresponding charges. Accordingly, we are in the midst of determining an appropriate charging mechanism.

John Jauncey
Director, Information Technology Services
john.jauncey@its.utas.edu.au

The University of Saskatchewan charges users for the “final leg” of access to the campus network. We have an Ethernet network, campus-wide, shared by both academic and administrative users. The basic inter- and intra-building infrastructure of fiber, closets, intra-building fiber and bridges, routers, etc. are paid out of general campus capital funds, but the user or his/her unit pays for the final leg from the closest closet, including labor, medium, conduit (if necessary) and terminating port back in the closet. Typically that is around $700-$900 (Canadian) for the user, and on a per-user basis, the infrastructure costs a similar amount, for one-time capital. We do not have, and currently do not plan for, any usage charges.

Bob Kavanagh
Director, Computing Services
bob.kavanagh@usask.ca

The University of the South (Tennessee) has live LocalTalk connections in each student room. Students are responsible for obtaining a PhoneNet connector to connect their Macintosh to the network. There is a charge of $25 per semester for an Ethernet connection in the residence halls. At present there are two residence halls where Ethernet connections are possible. Next year there will be one Ethernet-only residence hall, and most others will have Ethernet as an option. There is no other charge to students for LocalTalk connections.

The University provides dial-in access to the network to the public for $10 per month for an hour per day connection time. Dial-in access is available to students who live outside the residence halls and to faculty and staff at no charge.

Laurence Alvarez
Associate Provost
lalvarez@seraph1.sewanee.edu

The University of Kansas (main campus) is now charging $30 per year for dial access to the campus network and Internet. Modem speeds up to 28.8 kbps are available. On-campus Ethernet connections at 10 Mbps are $400 installation plus $3 per month per active connection.

Jerry Niebaum
Executive Director
Information Technology Services
niebaum@ukans.edu

The network department at Michigan Tech (MTU) charges a flat fee for network access. Faculty/staff connections are charged at the rate of $13 per month, and laboratories of workstations are charged $10/month per station (owing to the fact that grouped connections are somewhat cheaper to implement than individual connections due to economies of scale). There is also a one-time service charge of $20 to add or move a workstation on the network.

The revenue produced from charging does not fully fund the network. Additional monies are budgeted by the administration to the central network service organization. Thus networking is subsidized (real figures on the cost of a connection run $50 to $75/mo).

MTU’s mechanism does not presently impose a use charge (i.e., a per-bit or per-packet charge). MTU “allocates” the cost across all of the users. While this may not be eminently fair (some users certainly “use” the network more than others), there is a significant cost associated with counting packets, which we currently avoid.

We have found many benefits to source charging. Involvement in the networking process occurs when departments spend real dollars out of their budget. The payment of the monthly fee is a “vote” that gives the upper level administration a real quantitative indication that departments really need networking and that the service organization is responding to those needs.

Control over network expenditures (resource control) comes about due to the fact that it is now a cost imposed on the user/department. The user

Editor’s Note:
For lack of space, we were unable to print all responses received. All responses to this question have been placed on the CAUSE Gopher server (gopher://cause-gopher.colorado.edu/), under Publications, CAUSE/EFFECT, Volume 18, Number 2, Readers Respond. You can also access CAUSE/EFFECT articles through CAUSE’S World Wide Web server (http://cause-www.colorado.edu/).

Or send e-mail to search@cause.colorado.edu containing the message: get cem952readers
no longer assumes that the cost of connecting is covered by central funding. A much more intelligent judgment can be made on whether or not a certain computing solution is a cost-effective method of solving a particular education problem.

Chargeback systems can reduce the effort required to make decisions about expenditures needed to expand and improve the performance of computer networks: users themselves make the decisions every time they pay a fee for being connected. Users understand that this fee goes directly to enhancing and expanding the network to accommodate their network device.

John Louis
Manager, Telecommunications & Networking
louis@mtu.edu

In 1989, Lafayette College (Pennsylvania) made a strategic decision to provide free network access to students. We decided at the time that even a nominal charge of $50 or $100 for a semester would discourage some students from using the network as an experimental medium. They would decide to purchase a copy of a word processor rather than connect to the network where they might try e-mail or other services. For the same reason, we budgeted centrally for network connections for all faculty and staff for the first three years, meaning that anyone who requested a connection during that period received the card and software at no charge. Today, only new connections for additional staff or lab equipment are charged to departments. Lafayette uses IBM Token Ring boards, Novell Netware for software access, and TCP/IP for local and Internet communications.

Les Lloyd
Director, Computing Services
lloyd@lafayette.edu

The current policy at the University of New Mexico is that data outlets in offices, classrooms, laboratories, and conference rooms should be as ubiquitous as telephone outlets. The University has therefore funded a project to implement an optical fiber campus backbone and rewire all campus buildings using level 5 unshielded twisted pairs, which will provide network connectivity from the desktop to the backbone at speeds of up to 100 Mbps using FDDI over copper or the emerging 100 Mbps Ethernet standard. This is a four-year project, which is 75 percent complete, funded by the University with no recharge to users for standard 10 Mbps Ethernet connectivity. Users who need higher speed connectivity (e.g., 100 Mbps FDDI) at the desktop do pay for any extra interfaces required at building hubs or routers. Users in buildings that were low on the priority list for internal wiring have the option of moving up the priority list by paying for their connections.

There are no charges at this time to UNM students, staff, or faculty for access to any Internet services for which there are no fees. Users have to make their own arrangements to access services available on a fee-for-service basis. UNM students, staff, and faculty can also dial in to any UNM shared computer resource from which they can access Internet services. This is not a problem for local students, but students living far from campus may have to pay long distance telephone charges to use this service.

John Sobolewski
Associate Vice President for Computing
jssob@unm.edu

The U. S. Coast Guard Academy (Connecticut) does not currently have any network chargeback system. We are considering a charge to all cadets to cover “personal” usage. However, the issue is not cost recovery. The issue is the ethics of use of government equipment/services for personal use. There is no way to monitor the net to prevent or monitor personal use. Internet access is a fixed cost. However, how do you explain the ethical implications of this? We are choosing to demonstrate that government equipment is not free for personal use by charging a flat fee for such use.

Commander Steven M. Conway
Head, Department of Information Services
conway@dcseq.uscga.edu

At Clackamas Community College (Oregon) we do not charge back on a monthly or annual basis for network access at this time. The costs to maintain our internal and external networks and connections are part of the computer services budget. We do charge back for the initial connection to the network. A cost of $250 covers wiring, software, network interface cards, and network port.

Paul Rothi
Chief Information Officer
paulr@clackamas.cc.or.us

The Department of Computer Services at the University of South Africa is responsible for all computer-related services within the University. Currently the department receives requests for computer hardware and software and prepares budgets that are presented to management for approval annually. The University then allocates funds that are used to purchase and supply the needs within the budget restrictions.

We are currently planning for the implemen-
tation of a concept under which we will have to function as a cost center for all services supplied by the department. These plans have not been finalized, but we plan for this system to be in operation by mid-1996.

Vic Stipinovich
Director, Department of Computer Services
stipivn@alpha.unisa.ac.za

Arizona State University has had and continues to have a policy of not charging faculty, staff, or students for legitimate use of computing resources. This includes Internet access. As with other universities, we are watching as the Internet is privatized, fully understanding that there is a high probability that eventually the capacity charging model we are now working with will change to a usage charging model. When this happens, it is our goal to continue to provide Internet access on a no-fee basis. We, like most universities, have worked hard to get our customer base onto the information superhighway and fear that if there is a usage charge passed on to them, they will shy away from using what may be the most significant educational paradigm change of the 20th century.

A potentially more important issue than the impact of this charging model change on the university campus is the impact that it would have on the K-12 community. At a time when we are working hard to get them as players on the information superhighway, they may find that the toll roads are prohibitive for them to travel.

William E. Lewis
Vice Provost for Information Technology
william.lewis@asu.edu

Creighton University, a private university in Omaha, Nebraska, implemented a “utility fee” for campus and Internet network usage, effective July 1, 1992. This fee, structured at $6.25/month or $75/year, is imposed on all administrative and academic users. The revenue generated is used to sustain and improve the University’s network capacity and capability, which will include nearly 5,000 connection locations by July 1, 1995. The fee, which is about half of the cost of providing a dial tone to a campus phone, is not assessed for student connections in their residence hall rooms, nor is it imposed for curriculum computing labs and general student user labs. To date, only one complaint has been received about the charge of the utility fee. Others have enthusiastically supported the utility fee concept as charging only those who use the service provided. It generates nearly $100,000 a year and provides funding for network operations and improvements (providing technical support all the way to the back of the individual computer) which would probably not be forthcoming from the University budget.

Recently the University’s Board of Directors approved a new fee structure that includes a $50/year technology-users’ fee for full-time students and $6/year for part-time students, effective Fall Semester, 1995.

Leon G. “Benny” Benschoter
Vice President/Information Systems
bennyb@creighton.edu

Portland Community College (Oregon) has a new wide-area network that supports centralized administrative applications, electronic mail, dial-in and dial-out modems, and Internet access. Students use the network only through one of the computing labs located on each campus. There are currently 1,500 network connections.

At this time, network services are delivered at no charge. However, beginning in the fall, there will be two additional network services that staff and faculty can receive for a yearly fee. The first provides the ability for work groups to share files and printers without investing in a LAN. As an added incentive, network faxing will be included. The yearly fee for each customer for these services is $45.

The second new service, which is also optional, will be a subscription to desktop software via the network. Customers will be able to use Microsoft Office for Windows, Internet client software, Windows 95, and any other free or cheap software that we find to bundle with it. They will run the software from a network server, where it will be updated with new releases. The yearly fee will be $75 per user.

Ray Grant
Director of Information Technology Services
rgrant@pcc.edu

Regis University (Colorado) is not charging students for access to its networks. However, Regis does charge students the same cost the University pays to the Internet supplier for Internet access. The University is considering a fee for computer access on the campus.

Dennis Simms
Director of Information Services
dsimms@csn.org

Access to North Carolina State University’s administrative network and customer support services is viewed by the Vice Chancellor for Finance and Business as a necessary tool that facilitates more effective business practices. This concept is especially important during the current trend of downsizing and budget reductions.

“...
MIRC (the Management Information Resource Center) is a department within the Office of Finance and Business charged with providing a production level, fault-tolerant administrative networking environment and customer support services to administrative users throughout the University.

Services provided are well defined in a service level statement, continually updated and communicated to all MIRC customers, currently numbering 1,200 faculty and staff. State funding is provided by the Office of Finance and Business through MIRC to provide these services to all state-supported administrative users. In accordance with University budget guidelines, faculty and staff (supported by receipts) pay an equivalent annual fee, currently $820 per user account, for access to the administrative network and all customer support services. Network access and support services are offered only as a whole package, to simplify administration, promote use of all available network services, and provide an across-the-board standard environment that allows for more efficient customer support efforts. Users are individually responsible for the purchase of their workstation, network interface card, printers, and peripheral devices. MIRC provides the network infrastructure, software licenses, and staff for customer support services. A summary of services provided would include:

- Licenses for a standard suite of software applications, providing for e-mail, calendaring and scheduling, word processing, spreadsheets, databases, SQL query to institutional data, 3270 mainframe access, World Wide Web browser and other Internet tools, network-based faxing, project management, and graphics manipulation.
- A help desk, available by e-mail and phone, to assist with problem resolution, questions, and consulting.
- A hardware technician to assist with hardware installations, troubleshooting, and upgrades.
- Computing consultants who provide worksta-

Michael K. Fox
Director
Management Information Resource Center
michael_fox@ncsu.edu

At Université Laval (Quebec, Canada), we do not charge students for access to the network, either from the campus or from outside through about 100 available lines. We have made it a matter of policy, in a plan adopted in 1993, to make access as easy as possible for students, faculty, and staff. This called for abolishing a previously existing monthly charge, adding 40 new lines, and planning for more. At this time, we see charges as counter-productive. We don’t charge for snail-mail; why charge for e-mail?

Yves M. Giroux
Assistant to the Rector Directeur du Projet AMI
yves.giroux@rec.ulaval.ca

We do not charge for network access at Oakland University (Michigan)—nor do we have any kind of internal charge system for computing. The philosophy is simple: we want to encourage use of technology, not discourage it, and charge systems serve as a negative inducement.

There is a practical side as well. Internal charge systems are notoriously expensive to administer, so why not save the hassle and the dollars and apply the savings to improving the infrastructure?

Bill Connellan
Associate Vice President for Academic Affairs
connella@jupiter.acs.oakland.edu

Fall 1995 Readers Respond Question

What constraints, if any, is your institution placing on the use of institutionally owned computing and network resources? Under what conditions is external access allowed?

Please send your response, along with your name, title, e-mail address, phone and fax numbers by electronic mail to: jrudy@CAUSE.colorado.edu; by fax to 303-440-0461, or by regular mail to CAUSE/EFFECT Editor, CAUSE, Suite 302E, 4840 Pearl East Circle, Boulder, CO 80301.