

**Computing Services
Unit Annual Report
2002-2003**

Personnel

John Bowers - Director
Pam Gades - Instructional Technology Specialist
Linda Harstad – Business Manager
Dave Minners - User Support Supervisor (6/02-1/03)
Dave Savela - Network Manager
Lynn Schulz - Principal Analyst/Programmer
Matt Senger - User Support Supervisor (joined 2/03)
Mark Van Overbeke - System Administrator
Rebecca Webb - Web/Events Calendar Coordinator
Doug Williams - ResNet Administrator

Student Consultants, Morris Academic Partners, Morris Administrative Interns:

Shane Andreasen, Joel Blaha, Paul Brifo, Cedar Gillette, Tim Gorecki, Tony Heinen, Matt Helgeson, Kyle Hosker, Amanda Hyde, Jolaine Jennisen, Matt Johnson, Aja Josephson, Russ Kerfeld, Curtis Kunkel, Chauntel Larson, Tria Lor, Angie Lozano, Toby Martinez, Hope Miller, Cassie Morey, Roy Oxford, Kim Quistorff, Mike Reynolds, Juliana Robertson, Kate Rolfs, Matt Senger, Aaron Vasecka

Purpose

UMM Computing Services provides technology support to all UMM's instructional, research, and administrative programs.

Function

- A. To maintain and improve the campus-wide network, the residence hall network, and UMM's Internet link.
- B. To manage and operate central systems for academic and administrative users, including email and web servers.
- C. To provide well-equipped public computing laboratories and classrooms for instructional and research use.
- D. To give technical assistance and user support to faculty, students, and staff for computing projects of all types.
- E. To design, develop, and maintain databases and administrative systems to serve the record-keeping and management information needs of the campus.

- F. To offer training on computing applications and network resources via short courses, written handouts, newsletters, and tutorials.
- G. To see that UMM's needs are considered in University-wide technology planning.
- H. To project campus computing and network needs, to plan for the future, and to lay the groundwork to see UMM's needs fulfilled.

Evaluation

Virtually everybody at UMM makes use of computer and network technology in one form or another. UMM Computing Services has a unique mission and function that challenges us to provide service and support to every member of the faculty, staff, and student body at our campus. Some of the major areas in which leaps of progress will be noted in this annual report are: campus network; public labs; UMM web site; administrative and academic support systems; instructional technology; and efficient and effective use of our technology budgets at UMM.

Public labs. UMM Computing Services maintains computer labs across campus, some of which are also used as classrooms. An all-new lab/classroom was opened in Fall 2002 in Science 2530, equipped with 24 powerful Windows XP computers along with Cougar Cash laser printing. The new lab was heavily scheduled for class meetings, helping to reduce the demand on our Camden 10 classroom. In keeping with our philosophy of preventing the campus from overextending its technology resources (creating a structure of labs that would not be maintainable when systems need to be replaced), a lab was also closed in this academic year. This was the lab located in the basement of the Office of Residential Life building, a chronically underused facility. Other lab improvements included new tables in Behmler 10, some of which were designed for handicapped users. During summer 2003 the open Computing Services lab on the third floor of Briggs Library is being redesigned into an enclosed room which will serve both as a public lab and as a library instruction facility. Also in summer 2003, Media Services is opening a Digital Media Lab which will fill a need on our campus for a specialized Macintosh classroom for arts, video, and media.

Administrative systems. A number of changes, both small and large, add up to greatly improved efficiency and effectiveness in data management for UMM departments this year. Some of these used web-based interfaces to central University systems to offer new features and services. Online submission of grades, via a web form, was successfully introduced as a new requirement across the University's campuses this year. UM Pay, a new system to make student billing fully electronic and to allow the capability to pay bills electronically, went online at UMM in July 2003. The Alumni and Development offices completed the transfer of their entire Vax database, a UMM-only system, to become part of the central Donor Management System (DMS). We thank Lynn Schulz for tireless efforts in moving data and making DMS fulfill the needs of UMM External Relations. Lynn was also the person who made machine-readable Student Opinion of Teaching forms work for the UMM campus. This project, using an NCR OpScan scanner with a paper form designed by Lynn, will save hundreds of hours of data entry every semester. Summer 2003 witnessed a very innovative advanced-level Computer Science class led by Nic

McPhee and Rob Faux, using students to develop real-life web-based administrative tools using live University of Minnesota course data. Some of these tools became part of the UMM One Stop services when they were completed. Two other notable developments to mention in University enterprise systems: SUMMON (the UMM campus library catalog/circulation database) will be eliminated in summer 2003 as all University campuses change over to the central Aleph system; and the planned conversion of CUFS to a new system using PeopleSoft Financial was put on hold when a hostile corporate takeover bid put the future of PeopleSoft in question.

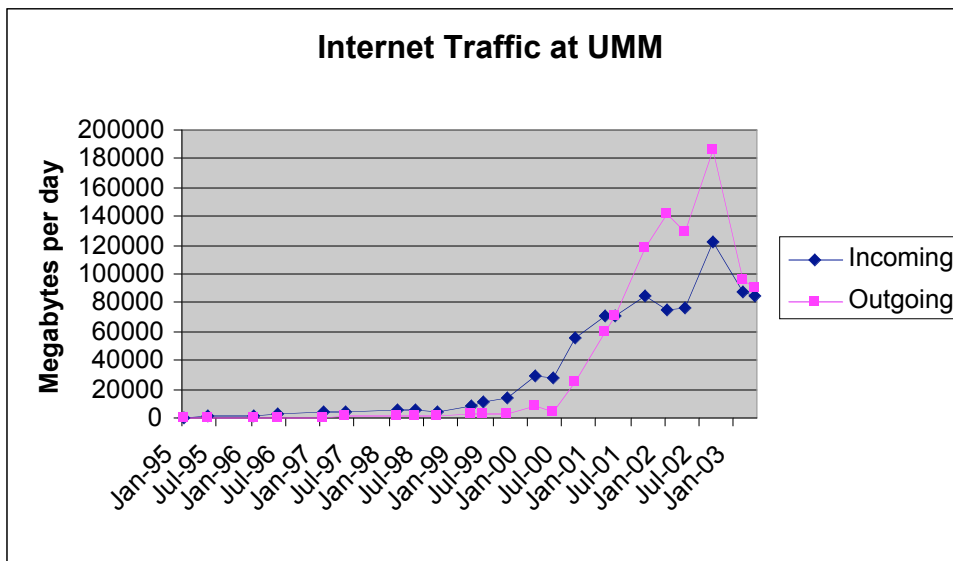
Instructional technology. With campus-wide leadership from Pam Gades, instructional technology training and services reached out to an increasing number of faculty this year. The IT Fair (November 14) combined exhibits, full-length training sessions, and short presentations for an exciting and enlightening experience for UMM faculty and Education Division student participants. The third annual Instructional Technology Institute (August 6-7) brought approximately 40 area K-12 teachers to campus for specialized training under the sponsorship of Continuing Education. In addition to these special events, Computing Services offered 25 short courses and workshops on a variety of current topics -- a total of 65 hours of training. Pam developed her "Creating Digital Media" all-day workshop into a set of reusable modules, and she presented on this topic at a conference. The "TEL Toolkit" (Technology Enhanced Learning) and the University-wide Microsoft Campus License have both put important cutting-edge software packages into the hands of UMM faculty at no charge to UMM. The faculty desktop computer replacement program funded by the Vice Chancellor for Academic Affairs has entered a new period in which computers are now ready to replace which were bought in the first years of the program; Computing Services administers recycling and sale of these computers to return some funds to the VCAA to help fund the ongoing program.

Budget and personnel. UMM Computing Services, along with other campus departments, had percentage-based budget cuts that required us to return funds allocated for 2002-2003 as well as reducing our budget for years ahead. The User Support Supervisor position's annual hours were cut. This position was filled for part of the year by Dave Minners and then by Matt Senger starting in February. Matt is also the UMM Enterprise Systems Implementation Coordinator, a position managed by the Senior Administrative Director of Finance and Administration. In addition to staff reductions, Computing Services made cuts to the budgets that support the UMM campus network and central systems; these are not expected to noticeably impact ongoing service to the UMM community. Computing Services phased out most charges to departments three years ago, freeing up funds in UMM's academic and administrative departments for other uses. Computing Services director John Bowers was elected by the Administrative Committee to be a member of the UMM Budget Task Force.

Narrative and/or Statistical

Network. UMM Computing Services maintains the entire UMM campus network. Of about 2,000 total network connections on campus, only about 22% are billable connections used for faculty and staff desktop computers; the \$100 annual charge for these connections has never been increased since it was instituted in 1992. Another 51% of UMM's network connections are free ResNet connections for students, and about 27% of the campus's connections are free

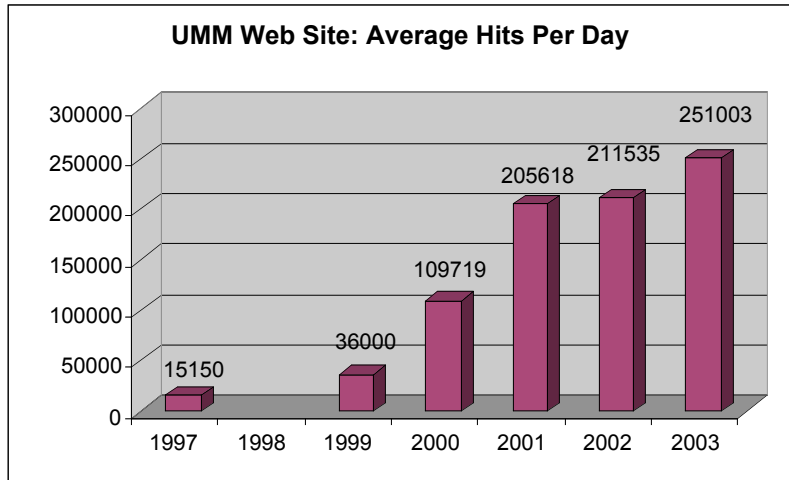
services provided and supported by UMM Computing Services: network printers, classroom connections, computer labs, meeting rooms, and so forth. In addition, of course, Computing Services is responsible for all central network electronics, campus servers, and the connection to the University network and the Internet. We thank Linda Harstad for careful management of the networking budget and all Computing Services finances.



After the massive unexpected and unfortunate spike in Internet traffic over the past two years, caused by file sharing of movies and music, the University of Minnesota adopted a technology called Packeteer to bring some limits to the (mostly illegal) usage. The Packeteer server analyzes traffic on the network and can be configured to set ceilings on how fast various types of traffic are allowed to move across the network. Thus we can permit web traffic and email to travel at full speed while causing peer-to-peer file transfers to go more slowly, preventing the serious problems of network congestion which we faced at the beginning of the fall semester. User education on this issue, beginning with Computing Services and MCSA, also helped bring music and movie piracy under control at UMM.

An audit of UMM's network was conducted by University telecommunications engineers as part of a project commonly known as the "Next Generation Network." Of all the four campuses, Morris's network was judged to be the most consistently high quality and the most ready for the new high-speed gigabit electronics that will be installed over the next few years. Dave Savela and Doug Williams earn our thanks for keeping the campus network and ResNet in such exceptional shape. Three important projects brought new capabilities and new reliability to UMM users this year:

- Our Internet service contracts now include a route for traffic to be redirected in case of a physical service outage. Outages due to fiber cuts now commonly last only a few seconds while our traffic is switched over to our secondary route.
- Video traffic on the campus has been moved to a physically separate network. This allows us to use "quality of service" technologies that provide special handling to video meetings and distance education classes.
- Wireless access to the network is now available in the Student Center and Briggs Library.



Web site. Data on usage of the UMM Web site (the month of April is used as our data point for each year; no data available for 1998) shows demand increased again in 2003 after leveling off in the previous year. Our monthly WebTrends reports, developed by Rebecca Webb, allow us to report some details about the characteristics of our users. A total of 111,840 unique visitors used the UMM Web site during April 2003; of these, more than 85% visited the site only once, while 14.4% (16,109) used the site more than once. Visits to the site lasted an average of eleven minutes, and 63% of our visits came from within the University of Minnesota network domain. Visits to the site from international (non-U.S.) domains comprised 6.8% of our users. The most-used pages on the site, apart from our home page, were Computing Services, Directories, Library, Registrar, One Stop, and Athletics. The UMM Athletics pages were among dozens that had major site redesigns with Computing Services help this year. Rebecca Webb developed training for faculty and staff in creating web pages that are accessible to people with visual, audio, or motor disabilities, and we will continue to push awareness of this issue and compliance with University policies in the future.

Major changes recommended/Plans for 2003-2004

1. *Improve mail services for the campus.* Install a new server structure that tightly integrates the Morris campus with central University mail services. Improve spam blocking (preventing messages from known spam sites from arriving at UMM mailboxes) and spam filtering (labeling messages that appear to be spam so that users can more easily manage and delete them). Protect against viruses in all incoming mail messages. Offer more full-featured list management with better self-service capabilities. System administrator Mark Van Overbeke has been working tirelessly on this project.

2. *Open the new Library 3rd floor Computing Services lab.* The new Windows computer lab will replace the former open computer area with an enclosed facility that can be used by the Briggs Library staff to offer library instruction sessions to students.

3. *Begin offering 100 mb/s service to users on ResNet and the campus network.* Join in the University-wide effort to replace obsolete switches and other network electronics. Begin implementing a plan to replace 10 mb/s service with 100 mb/s service, over the course of three

years, to all network users on campus. Increase backbone speed from 100 mb/s to gigabit service. Meet the demand for improved access to multimedia services across the network by providing the fastest network speeds available with current technology.

4. *Use the new University-wide Microsoft license to improve support for Windows, Word, Excel, and PowerPoint.* Reduce dependence on old versions of Windows, install the Office suite more widely, and offer widespread training on Office applications that are now available free for all University-owned computers (and at very low cost to students).

5. *Develop new web-based interactive data services for departments, taking advantage of the UMM Cold Fusion server.* These new database services will improve information and services in such areas as student employment, calendar/event management, and online information about student organizations. Matt Senger, who is developing expertise with ColdFusion, will be centrally important in this effort.

6. *Support the campus-wide effort to eliminate administrative and financial shadow systems.* Such systems (which duplicate data from central databases in order to allow local departments to manage information and reports) were identified as an important problem by the Budget Task Force in spring 2003. Computing Services has a central role to play in identifying these systems and finding ways to create the same reports and management information without the wasteful effort of duplicate data entry.