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# *Academic Computing*

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# Spring 1997

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Dr. Paul Sokol, Physics Professor, helps students learn Physics through computer simulations.

# Internet brings new challenges, opportunities to faculty

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By John Harwood

While researchers at Penn State are understandably excited about “Internet II” (the aggressive plan to increase band-width between major research centers), teachers should also expect to see some surprising new opportunities. In a couple of years, with the upgrades to our campus network completed, we will be able to send a variety of data to classrooms, computer labs, and individual computers. You’ve heard the news before—instructional video, multimedia, virtual reality . . . How will these staggering improvements in the Internet change teaching and learning?

My guess is that in the first year, teaching and learning won’t be greatly altered. A few “eagles” will experiment, and some ideas will probably work better than others. But, within a year or so, we’ll have some exceptional tools to share—tools that will enable many faculty members to exploit the network’s resources. The Committee on Institutional Cooperation (CIC) and the Library community hope to build rich electronic archives of materials that can be shared, and Penn State will be among the leaders in such initiatives. (The CIC is the academic consortium of the members of the Big Ten athletic conference and the University of Chicago.)

Teaching faculty won’t need to worry about the technical details, but they will have to

consider how they think about instruction. They will need to make some very hard choices (ever a requirement in teaching). What is the best way to teach a difficult concept? What kinds of resources are necessary to teach a complex skill? What is the best order in which to present material? How do we get students to interact more effectively with each other? How can we assess students’ progress? In other words, the new technologies will not simplify teaching; they will not eliminate the challenges of instructional design; they will not, by themselves, promote learning. The role of the faculty member will be changed, not eliminated, by these new resources. I suspect that class attendance will decrease and class participation will increase. I’ll not explain that paradox.

My view is that teachers should think of the network as an enabler. It invites us to dream about collaboration with faculty at other institutions; it invites us to develop teaching materials that will draw on all of our senses. (Yes, we are now going to be able to take advantage of highly realistic simulations of the sort previously reserved for pilots and astronauts.) And it urges us to think about the WWW as something more than the world-wide wait.

By the year 2000, we can expect that most of the first-year class will have applied to Penn State via the Web, not by a paper application. They will



enter a university where collaboration among CIC institutions has become routine; they will probably find themselves in classes (though perhaps not in the classroom) with students who do not live in Pennsylvania or even in the United States. They will bring laptop computers to some of their classrooms—and connect to the Internet in classrooms, libraries, businesses, dorms and computer labs. They will find that they interact frequently with their instructor in a variety of electronic contexts, and consequently have unique opportunities for interaction, mentorship and learning that have not existed previously . . .

New roles for teachers, new resources for students, new challenges for higher education. Sounds like fun to me!

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*John Harwood is Director of two organizations within the CAC: Education Technology Services and Consulting, Training, and Outreach. He is also an Associate Professor of English.*

# Designing a virtual learning environment for Physics students

By Heather Herzog

Imagine it's the first day of the introductory physics course you're taking. Instead of walking into a large lecture hall along with two hundred students or more, as you expected, you find yourself in a bright, newly renovated room on the third floor of Osmond Lab. The room is filled with computers, and there are about forty students present. Each computer is shared by three team members. You take your seat next to your two partners, and the three of you begin the day's lesson. Using Videopoint, a software program that allows you to digitize the position of objects in movies, you start a Quicktime movie of the space shuttle taking off. One of you clicks on a selected point on the shuttle, and its position—in screen pixels—appears in a table. You and your partners quickly step through the entire movie. When the video ends, you call up a "ruler" and measure the wing of the shuttle to set the scale, and your data is converted to actual distances. Taking turns, your group copies the data into a spreadsheet (using Excel), and this allows you to produce graphs which reveal characteristics of the shuttle's motion, such as acceleration, velocity, and distance. Throughout the exercise, you discuss your results and analyze each procedure with your partners, intrigued by the notion that professionals use similar collaborative methods in their jobs every day.

In less than a year, Associate Professor Paul Sokol has generated the effort and vision to make the above scenario a reality. A student who takes Dynamic Physics 201 (or the honors version of the course, H201) is entering an experimental classroom that employs what Sokol terms the



*"I find that I work much harder at teaching in this class because I am responsible for much more than the delivery of information. I am continuously interacting with each of the individual computer groups throughout the two-hour class period."*

— Dr. Paul Sokol

VLE, or Virtual Learning Environment. Students in VLE-based classes do not have the option of sitting quietly through a formal lecture, absorbing the principles of introductory physics in the conventional "sponge-like" way. Instead, the emphasis in Sokol's pilot course is on using computer technology to foster an atmosphere of "active" learning by inspiring interaction and interplay among all the members of the classroom. Indeed, the Dynamic Physics 201 classroom at Osmond Lab presents a pedagogical system that encompasses at least four levels of interaction: student to student, teacher to student, student to teacher and student to computer. "Interaction is key to this type of learning," Sokol states. "If an instructor were to just sit at the front of the class reading his or her E-mail, expecting the students to perform the class activities with no input, a course like this could not be successful."

"Truly," he continues, "I find that I work much harder at teaching in this class, because I am

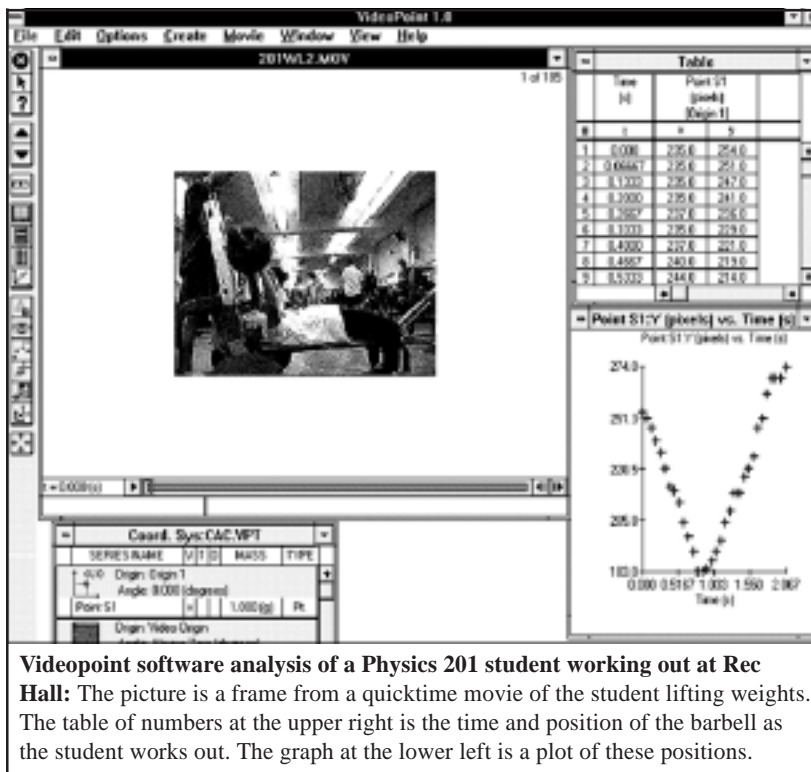


Dr. Sokol helps students use Videopoint and Excel software to produce graphs which reveal physical characteristics of the space shuttle's motion, such as acceleration, velocity, and distance.

responsible for much more than the delivery of information. I am continuously interacting with each of the individual student groups throughout the two-hour class period.”

According to Sokol, several motivating factors brought about the inception of the pilot mechanics course. Many studies suggested that large lecture settings were ineffective for introductory physics courses. Consequently, educators began to develop software that would facilitate computer-based collaborative learning in college level physics. One such effort, Studio Physics (implemented at Rensselaer Polytechnical Institute) was investigated by Vice Provost and Dean of Undergraduate Education John Cahir, Dean of Science Greg Geoffroy, and Physics Department Head Howard Grotch, who were exploring ways to improve the educational experience for Penn State undergraduates.

Concurrently, as Sokol taught introductory mechanics physics to large lecture-oriented classes, he became interested in finding a way to provide clear physical illustrations of the principles he was teaching, beyond merely presenting abstract ideas to students. With the aid and programming abilities of graduate student Robert Dimeo, he began to investigate authoring tools such as CUPLE (Comprehensive Unified Physics Learning Environment) as a means to demonstrate physics principles in the classroom. But Dimeo and Sokol quickly discovered that instructors would have to invest considerable time learning CUPLE’s extensive hypermedia authoring language, and for most educators, Sokol decided, this was not an acceptable option. The virtual learning environment he envisioned needed not only to support applications like word processing, data analysis, model development and simulation, but



**Videopoint software analysis of a Physics 201 student working out at Rec Hall:** The picture is a frame from a quicktime movie of the student lifting weights. The table of numbers at the upper right is the time and position of the barbell as the student works out. The graph at the lower left is a plot of these positions.

also had to be designed so that if an instructor wanted to add something new, or change an activity, he or she could do this quickly and without difficulty. Eventually they found a viable solution: they created the VLE for Physics 201 as a World Wide Web page. The materials were created with Microsoft Word’s Internet Assistant, making the generation of course activities as easy as typing a standard text document.

The World Wide Web browser Netscape Navigator provided a platform for the course that was flexible and easy to use both for students employing it and for educators who may eventually want to make design modifications or add new course content. Since it was perhaps the best known and most efficient Web browser, many users were already familiar with it, and it was easy to link the course home page to other Web sites containing information pertinent to the class. The “user-friendly” authoring tool Internet Assistant enabled Dimeo and Sokol to

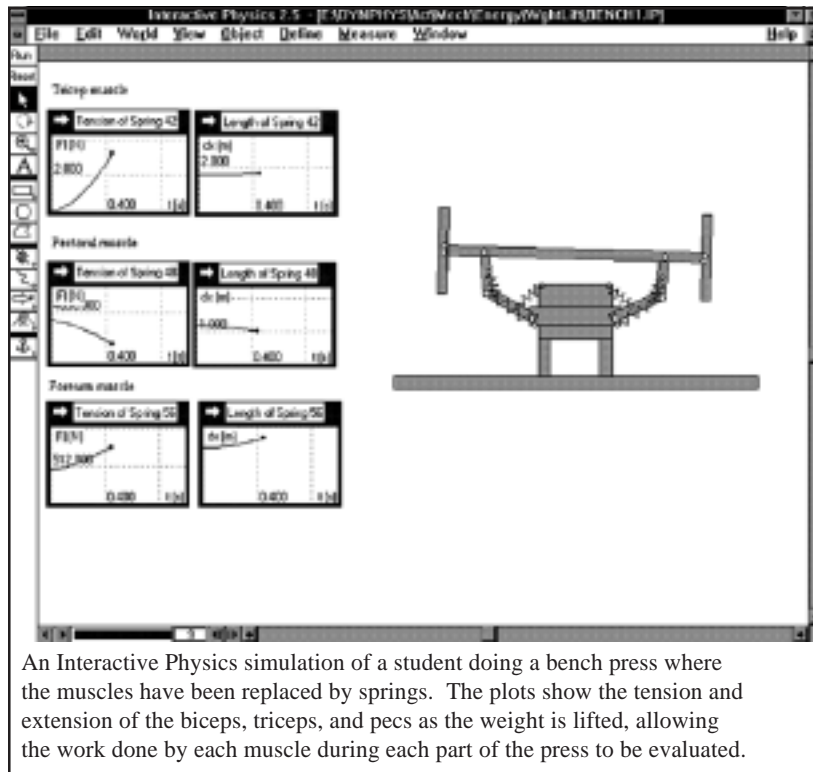
design a virtual learning interface that incorporated a variety of instructional features. Because of the simplicity and power of the interface, they felt it appropriate to name both the pilot course and the virtual learning environment they had created “Dynamic Physics.”

The Dynamics Physics VLE contains an impressive package of learning materials. Directories on its home page provide links to a network of resources including course information, applications software, related campus services and the Internet. From any computer on or off campus, students can plug into the course’s URL (home page address) and access homework assignments, collaborative activities, grades, lab exercises, solutions, and general information about the course and its instructors. To facilitate data analysis and student write-ups of class activities within the classroom, the program has links to Microsoft Word, Excel, and, for class presentations, Powerpoint. In addition, there are links to Interac-

tive Physics (a software that allows students to test physics principles on pre-made simulations), and Videopoint, which allows the quantitative analysis of Quicktime movies. Finally, there are hyperlinks to Maple (a symbolic mathematics application) and Verniers Motion (software that utilizes motion detectors or force probes).

But beyond this array of software and network links, what makes Dynamic Physics a truly successful learning environment is the energy, creativity, and enthusiasm it produces in the students and instructors who use it. The enthusiasm in Sokol's classroom is palpable. There is a continuous buzz of query and discussion among the student groups, and Sokol himself is a high energy presence, circulating from one team to another. Added to this, Teaching Assistants and visiting faculty are also continuously making the rounds and offering input. Says Bob Kuech, a Penn State School of Education doctoral candidate who is conducting an evaluation of the pilot course, "Because students can see results immediately when they change parameters in an exercise, this frees them to talk more about the principal concepts, and therefore to understand them at a much deeper level." In fact, states Kuech, "when professionals and other physics faculty visit [Sokol's] classroom, they are often astounded by the level of performance of these first-year students."

Students themselves report a high interest level in Dynamic Physics. Undergraduate Elizabeth McChesney states, "this is one of the best, or perhaps is the best class I've had, because the physics is actually demonstrated. . . I really tend to do better with the material if I can bounce ideas off friends." In the same vein, Kuech mentions, when a class isn't scheduled to meet immediately after Physics



An Interactive Physics simulation of a student doing a bench press where the muscles have been replaced by springs. The plots show the tension and extension of the biceps, triceps, and pecs as the weight is lifted, allowing the work done by each muscle during each part of the press to be evaluated.

201, Dynamic Physics students will often stay late, continuing to work on the day's activities for hours. "You rarely see such a thing happen in a standard physics class," he adds, "there just isn't that kind of enthusiasm." According to Joan Mackin (a School of Education doctoral candidate conducting gender research in Sokol's class), female students, also, appear to prosper in the collaborative environment. Typically, Mackin says, women's scores in Physics and Engineering tend to lag slightly when compared to their male counterparts (though as more women enter the science fields this gap is closing). However, in the Honors version of the Dynamic Physics class she found "no significant differences between the average scores of men and women."

Careful evaluation of test scores is a prominent focus for Sokol as well. He and other faculty members have been comparing the test scores of Dynamic Physics

with standard lecture classes to see if a learning margin exists. The average scores of the students who took H201 Dynamic Physics last fall were much better than those of standard classes; however, some difference was expected since H201 is an honors class. Scores from the current Dynamic Physics class will be much more conclusive, says Sokol, since it is not an honors class, so they will be comparing "apples with apples." "When the results from the current Physics 201 tests are in," he states, "we expect to find that their scores are significantly higher."

*Paul Sokol is Associate Professor of Physics in the Eberly College of Science.*

*Heather Herzog, Writer/Editor, has an Ed.M. from Harvard's Graduate School of Education, and a background in Instructional Design and Technology in Education.*



# How I gave up VM and learned to love Eudora

By R. Thomas Berner



*“What attracted me to Eudora Pro was the ability to filter my incoming mail. I rely heavily on E-mail in my courses and I belong to 10 listservs and one electronic news clipping service. Most mornings when I log on at 5:00 a.m. I have about 50 messages—and that’s during a slow period. I get another 50 to 100 messages during a busy day.”* —R. Thomas Berner

Last year was a very stressful one for me. First, I upgraded my modem from 2400 to 14000 and had to learn new software to reach the mainframe. But I got over that.

Then—at my wife’s insistence—I bought a new computer, going from a low-memory 386 to a Pentium-based unit with 16 megabytes of RAM, a hard drive with giga in front of it, and a 28.8 modem. Not only that, it came with Windows 95 and all I knew was DOS.

Added to that were the rumblings on campus that one day we would lose VM. I commiserated with Dinty W. Moore, a Penn State English professor and the author of *The Emperor’s Virtual Clothes: The Naked Truth About Internet Culture*. He assured me that he would never give up VM.

“I’ll give up my VM account,” he wrote, “when they pry it from my cold, dead fingers.”

With that kind of attitude, I was willing to join him. A couple

of months later, now running Windows 95 and accessing my VM account through CACTWIN, I sent Moore a note. It was then that I learned a horrible truth—my VM hero was now using his Access Account.

“One day out of boredom,” he told me when I asked why he had changed, “I just started playing with Eudora, and I realized that it was far more flexible than I thought, and easier than my VM account. I was hooked.”

So I switched to getting E-mail with my Access Account and a software package called Eudora Light. At first I was tentative and awkward. I turned on forwarding in my VM account so everything went to my Access Account, but I still kept checking my VM account right after I checked my Access Account. I missed **laccount** and **classnews**, but since my students didn’t like VM, it didn’t matter. They insisted on getting everything on their

Access accounts and I obliged them since I didn’t want the technology to get in the way of the message.

Eventually, I learned that I could purchase a better version of Eudora called Eudora Pro. I checked out the specs on the company’s Web page and bought it. It’s \$42.24, which is a 50 percent discount for anyone working at a university, and you can buy it at the MOC (Microcomputer Order Center in Willard Building).

What attracted me to Eudora Pro was the ability to filter my incoming mail. I rely heavily on E-mail in my courses and I belong to 10 listservs and one electronic news clipping service. Most mornings when I log on at 5:00 a.m. I have about 50 messages—and that’s during a slow period. I get another 50 to 100 messages during a busy day.

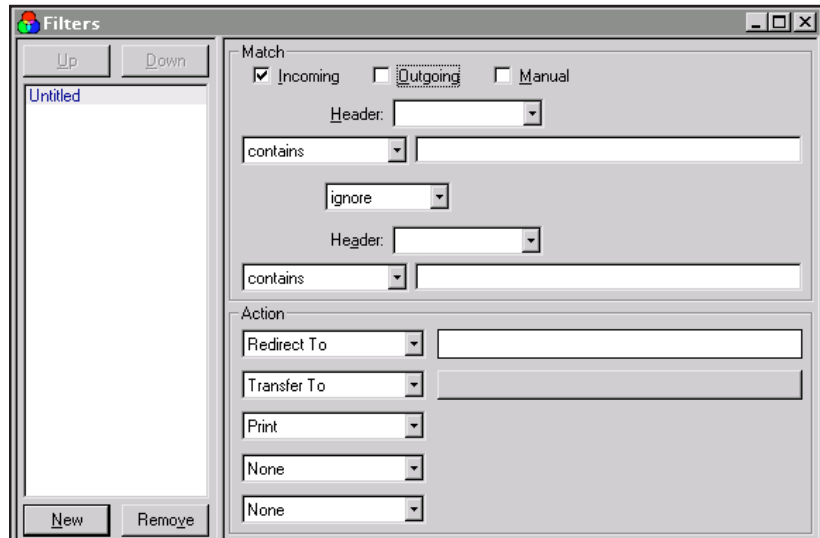
Since homework assignments are mixed among those messages

and there was no perfect way to sort them in Eudora Light, the filter aspect of Eudora Pro made sense. I now have 25 customized filters operating—for my courses, my listserves, my daughters, my deans, friends and colleagues, and an honors thesis I'm supervising. Now when I log on, mail is transferred to the appropriate mailboxes. Because I keep my mailboxes in full view on the left fifth of my screen, I can easily navigate among mailboxes. (The mailbox viewer, by the way, can be moved—or “docked,” as the instructions say—to anywhere you want, or turned off, one of many features limited to Windows 95 users.)

Setting up the individual filters is fairly easy and can be based on any line in the header or the text. In getting my students to be specific in the subject line, I also discovered that Eudora's “save as” feature reads off the subject line. So I have tightened the protocols for my courses, that is, made explicit what must go on the subject line, so that specific assignments can be easily saved to a Word folder, appear in an alphabetical grouping, and include the student's last name.

You can even set up filters that transfer E-mail to another user, but it lacks the quality of VM's forwarding command. Someone has to sign on to your Access Account, receive the messages, then execute the send command. So if you're out of town and want your E-mail forwarded, someone back home has to intervene, although the person doesn't have to forward manually.

Eudora allows you to send photographs. You can also send text as an attachment (as this was), and if the receiving computer is equivalent to yours, the text will show up with the original formatting. I get Word texts with different



Eudora Pro's message filtering feature allows you to modify incoming and outgoing messages automatically. Using filters, you can change message subjects, assign labels, raise and lower message priorities, and transfer messages to designated mailboxes. In the filter window, shown above, you can create filters that will handle mail according to the choices you make on the right side. *The above information and graphic were taken from the Eudora Pro manual.*

sized type, underlines, footnotes all intact. I can even format Eudora messages, but it's of little use if the person on the other end is using Eudora Light. If attachments aren't for you, you can cut and paste between your word-processing program and Eudora and even between and among Eudora messages.

Within Eudora I can use PH and finger. When a phone query yields the E-mail address I'm looking for, I just click on a **To:** button and a new message form appears on the screen with the person's name and address in the **To:** line. I can go back for more, if necessary.

Eudora comes with a spellchecker and, shock of all shocks, a 200-page manual in which you can discover things that you wouldn't readily find while muddling through the interminable help directory of Windows and Word. Furthermore, Eudora has an E-mail address you can query if you have problems. I've sent two

queries and have gotten one response, so there's hope.

QUALCOMM, the makers of Eudora Pro, are so happy with the software's virtues that as the CAC Newsletter went to press a news release arrived in my E-mailbox announcing a new version of Eudora Light with some of the features I've extolled in this article. It can be downloaded from <http://www.eudora.com> on the Web.

And how did Eudora get its name? According to its designer, Steve Dorner, when he was trying to think of a name for his Post Office Protocol mail program, he thought of a short story, “Why I Live at the P.O.,” and named the software after the story's author, Eudora Welty.

That's good enough for me and Dinty, too.

*R. Thomas Berner is a professor of journalism and American studies in the College of Communications.*



# Public Speaking via E-mail? Are You kidding?

By Nancy Wyatt

In Fall Semester 1995, Berks, Delaware County, and Mont Alto Campuses offered the first Project Vision courses: Library Studies 197A, Health Education 48, American Studies 100, and Science, Technology, and Society 200. See [www.clat.psu.edu/homes/pvgeninfo.html](http://www.clat.psu.edu/homes/pvgeninfo.html) for general background on Project Vision.

Michael Kane at Berks Campus and I developed a SpCom 100 course offered in Fall 1996. In developing this course, we were committed to preserving face-to-face communication performance goals of the traditional course, while incorporating Project Vision goals to work asynchronously through links on the Internet and in multimedia, collaborating in peer teams.

Our pedagogical goals were for the students (1) to plan and deliver messages effectively face-to-face, in electronic conferences, and in videoconferences, (2) to complete a group task, using both face-to-face and electronic conferencing, (3) to analyze and critically evaluate messages, and (4) to engage in informed and critical discussion of current events. We used FirstClass conferencing and PicTel videoconferencing, supplemented by Eudora electronic mail and telephone. Our syllabus and the syllabi for other Project Vision courses are at <http://www.clat.psu.edu/homes/projvis.htm>.

The students, who knew each other from previous Project Vision courses, formed themselves into four cross-campus groups. The groups conferred in an early PicTel meeting to choose topics for the semester: airline safety, gun control, Internet security, and welfare reform. Group members each gave two informative speeches on aspects of their topics during the first part of the semester, and at the end of the semester each

group presented a PicTel symposium on their topic. Following the symposia, the entire class conducted FirstClass discussions of the symposia issues. We graded the individual speeches, the symposia, and the electronic discussions. We also graded in-class and FirstClass participation in the conferences that led up to the symposia.

So, you will ask, what did we learn from our experience?

The ability to communicate across geographic boundaries does not insure the development of effective group collaboration.

Because of technical incompatibilities between Berks and Delaware County, the students were unable to use the Chat function on FirstClass that enables synchronous electronic communication. They were restricted to communicating across campus via formal FirstClass conferences that were monitored by the instructors. Hence, the students didn't have any informal "backchannels" by which to develop working and social relationships with one another. Additionally, some of the students owned their own computers, while others had to use the computers in the campus labs. Those students who used the labs tended to participate less in electronic fora. These inequities worked against the development of a true working group.

PicTel is a very difficult technology to use well, and available guidelines for using the medium focus on appearance instead of communication. In my humble opinion, the best thing we did in this class was to plan practice sessions for the symposia. Each group presented its planned symposium via PicTel to the instructors and to one other group for feedback before presenting the final graded symposium. In this way, each group trained the next group, who trained the next group, and the instructors were trained by all of the groups. PicTel is only putatively an

interactive medium. While it is possible for persons at two or more sites to see and hear one another synchronously, the medium allows only one person to speak at a time. Sequential turn-taking makes true discussion very difficult to sustain. Effective communication via PicTel requires a formal agenda controlled by a designated moderator who is highly skilled at managing the equipment and the communication interaction.

Communication is interactive — for speakers to be effective, someone has to be listening. The individual informative speeches during the first half of the semester were meant to provide background information for oral discussion following the symposia presentations. During the practice symposia, however, it became painfully clear that the students' intense focus on their own speeches had led them to neglect listening to anyone else's speeches. Since symposia grades were based partially on the quality of the discussion they elicited, the students' lack of knowledge about topics other than their own posed a serious problem for everyone. Panic ensued, and the students scrambled frantically to learn about one another's topics. This lesson may have been the most valuable lesson of the semester, pointing out, as it did, that individual success depends on effective group process.

I enjoyed teaching the course and I believe that the students achieved the performance goals we had set. I credit this outcome mostly to the students' hard work and to the high levels of advice and support provided by technical support personnel.

---

*Nancy Wyatt is an Associate Professor of Speech Communication and Women's Studies at the Delaware County Campus.*



# Project Vision enhances student learning



Photo by Cindy Decker Raynak

By Ann Deden

## Overview

Penn State's Commonwealth Educational System is committed to shifting our emphasis from teaching to learning: from near total dependence on classroom lectures to a blend of classroom and asynchronous learner-centered, anytime, anywhere instruction.

Project Vision is more than just adding computers into the academic mix. It represents a major change in the role of faculty and in the type of learning we expect students to engage in.

Underlying Project Vision is our conviction that the world our students are entering demands two things:

First: Independent learning skills — the ability to locate and use the resources that will let them learn what they need when they need to learn it as they cope with changing job requirements.

Second: The ability to use electronic communications tools to work collaboratively with colleagues around the world

Project Vision is our first step in preparing Penn State graduates to be expert learners and effective collaborators.

## Project Description

The project is currently underway at three Penn State campuses—Berks, Delaware County, and Mont Alto. Sixty students are participating—twenty at each campus—representing a range of backgrounds. The project team on each campus includes three instructors, a librarian, and technical support staff. Each instructor is also part of a course development and delivery team spanning all three campuses.

Project Vision is a student-centered approach to learning. Rather than depending on regularly scheduled lecture classes to receive information, students have access to technology that allows them to learn on and off campus, through links on the Internet and in multimedia—always working together with peer teams and faculty.

They use E-mail, group project software, multi-campus videoconferencing, and the World Wide Web. The role of the instructor is that of course designer, mentor, and coach, rather than a lecturer. In this way, Project Vision seeks to blend to best education

*Project Vision is a student-centered approach to learning. Rather than depending on regularly scheduled lecture classes to receive information, students have access to technology that allows them to learn on and off campus, through links on the Internet and in multimedia — always working together with peer teams and faculty.*

with the best technology to create a truly unique and contemporary learning environment.

Vision students are assigned laptop computers with modems and CD drives. They have access to a Vision Learning Studio on campus, where they can meet face to face to work on projects, help one another solve technical problems, or just plug into the Internet and do their homework. The Studios are heavily used, and help even commuting students feel part of campus life.

## Faculty Development

Project Vision has required our faculty to engage in high-speed, high-intensity change. They have had to open up their classes and their teaching methods to the scrutiny of their peers as they jointly develop new syllabi, course activities, and course management structures. They have had to move from highly teacher-controlled and presentation-focused teaching to a learner-centered and more learner-directed instructional mode. They have had to learn to use new technologies in a hurry. And they have had to use these technologies

to develop multimedia instructional resources for students.

In the process, they have found out that even master teachers can be more effective as leaders and mentors than they ever were as mere presenters of information. It feels good to really get to know a group of students. They and their colleagues can work together extremely well to help students develop the full range of technical, interpersonal, and subject matter strengths they need.

An administrator at one of the Vision campuses said recently that the difference in the halls is noticeable. Before Vision, faculty never discussed their classes. Now, she says, the talk of the halls is "What are you trying and how is it working?" Instructors who had worked in isolation are coming alive as members of a faculty with shared goals and dreams.

## Future Plans

The success of our first round of Vision is rubbing off on the other campuses. Over 143 faculty from all seventeen undergraduate campuses submitted proposals to engage in similar new approaches in their classes through Project Empower. Many of these proposals were from interdisciplinary and inter-campus groups eager to try even more innovative and integrative approaches to undergraduate education.

Working with major corporate supporters including IBM and Bell Atlantic, we are able to accelerate the pace of change in the CES. Vision is being expanded to include more courses and the sophomore year. Three additional campuses will become Vision campuses: Altoona, McKeesport, and York. A plan for expansion to these campuses is underway.

And our Vision experience has led us to develop a model for large-

scale educational change that we hope others can use. We're implementing this three-level model now: building a large base of faculty who are "power users" of the new technologies in a learner-centered mode; supporting faculty engagement in larger-scale course re-design; and generating a core of curricular resources that can be shared by all CES campuses, so that everyone benefits from their colleagues' innovations.

## Evaluation

A substantial body of evaluative data is being collected and analyzed. More information will be added to this section as reports are finalized. Preliminary data indicate:

- Vision students match non-Vision students at their campuses in terms of high grade point average, range of previous computer experience, gender, age, and race
- Vision students earned first semester grade point averages are above their predicted GPAs. Students report using their Vision learning skills and technologies in other classes.

- Students requested that a Sophomore Vision year be added.

We started Project Vision with a belief that dramatic, rapid change was necessary. Now fully engaged, we find the process exciting, rewarding, and downright fun. We invite you to join us in the adventure of a lifetime.

## Goals

Project Vision has spearheaded our commitment to creating new learning paradigms within the CES. Project Vision fosters an active and collaborative learning model fused with information and communication technologies in our effort to move the CES from predominately a classroom

teaching environment to an environment characterized by learning anytime, anywhere.

Underlying Project Vision is Penn State's conviction that the changing demands of society will require our students to locate and use electronic communication resources for problem solving, and to work in teams. These concepts continue to guide the design of Project Vision II.

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*Ann Deden is Director of the Center for Learning and Academic Technologies.*

*Additional information is available at the C-LAT Web site:*

*<http://www.clat.psu.edu/>*

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# Perspectives on the Millennium dilemma

By Rebekah Robertson

Now that the Year 2000 is getting closer, the media has been having a circus pointing out the number of companies and government agencies who have only just begun their work to remedy the problem. While people who work in the computer and technology industry clearly understand the year 2000 dilemma, many non-techies do not.

## The cause

Professor Joseph Lambert, the Head of the Computer Science and Engineering Department at Penn State, discussed the cause of the Year 2000 problem.

“When information systems were written a long time ago, machines were very slow and didn’t have a lot of memory. What we now call 1 gigabyte of memory equals 1 billion bytes; back then they didn’t even have 1000 bytes of memory. Conserving memory was a big concern, so in order to save memory people took short-cuts, and these short-cuts were actually a form of shorthand. For example: if you were to look at the date 01/31/97, this is six characters. If you were to use only the last two digits, it is only two characters; it takes up much less space. Of course, because memory was scarce it also cost a lot of money and this was another concern among users.”

## Millennium hysteria

Sensationalist media coverage has helped spread rumors that on the first day of the year 2000, the world is going to descend into chaos. Supposedly, ATM machines will not know who we are, those dead will be registered as alive, clocks will be wrong, street lights will be flashing . . . we will be in a



Professor Joseph Lambert, the Head of the Computer Science and Engineering Department at Penn State, discusses the cause of the Year 2000 problem.

twilight zone. This is not the case.

Most large companies, government agencies, and businesses, have already begun to implement solutions to the problem. Many have already finished updating their software for programs needed to place orders and store information for the year 2000. People wonder why companies waited until now to remedy the problem instead of attacking it early on. The answer is that they were fully aware of the problem years ago, but did not need to solve it until now. So while to the American public it looks like procrastination, it’s actually the action of companies and institutions prioritizing problems. Before this time, solving the Year 2000 problem was not a critical issue or top priority.

So what can we expect on January 1, 2000? Well, help desks will be set up to resolve any problems, but Professor Lambert is confident that institutions are aware of the problem and the real critical priorities have been solved.

## Penn State systems

Robert Crothers, the Deputy Director of the Office of Adminis-

trative Systems (OAS) at Penn State stated that Penn State has been actively working on the Year 2000 problem for more than two years now. Penn State is fortunate because some of their software products have been purchased with maintenance contracts from vendors; therefore, the vendors are responsible for fixing the problem. Because Penn State decided to upgrade over a long period of time, there has really been no large, one-time dollar cost.

Crothers described the work entailed: “The team has been working on the student system for almost two years. When they first started, they developed a program to check the almost 5,000 programs in the student system for dates. A good portion of them didn’t have dates so they didn’t have to worry about them. Then there were others that were for internal use—either screens or reports. There they determined that you could print 00 because everybody would know what it is. The only situation that poses a problem is when the data is sorted—of course 00 would come at the bottom instead of at the top

if you want the most recent. So there's where you would have the problem, or if you have to do some adding and subtracting."

The student systems were installed between 1983 and 1985 and were kept up to date. According to Crothers, all the business systems are new and in good shape. Because of this, Penn State's software could be mended and upgraded and none needed to be replaced. In contrast, some other Big Ten Schools have chosen a different route for solving the Year 2000 problem. Schools like the University of Michigan, Ohio State, and Wisconsin have chosen to buy new software from Peoplesoft, to upgrade existing systems. When asked if he expects any chaos or unforeseen problems to surface on January 1, 2000, Crothers answered, "It's easy to test an individual problem one at a time, but you can't test all 5,000. And it may be that in one program that passes data from one to another, you might not have tested that situation, but those things can be corrected when they happen. The good thing is that it doesn't all happen at once. Penn State is admitting students this year who will be graduating in the year 2000, so we had to begin solving

*"Penn State is admitting students this year who will be graduating in the year 2000, so we had to begin solving the Millennium problem a couple of years ago."*

— Robert Crothers

the Millennium problem a couple of years ago."

When asked how much work Penn State had left to do, Crothers showed a chart detailing the current position of Penn State's work and what they have accomplished in their software upgrade. They began the chart in August 1995 and have only the very tip of the chart left to fill in.

Crothers noted that Penn State cannot control what other organizations such as PHEAA are doing to fix their software problems and hasn't tested those other organizations. However, Crothers stated, "the things that we can control at Penn State are almost done."

### **Pennsylvania initiatives**

While Penn State is almost finished upgrading its software, the Commonwealth of Pennsylvania has only just begun. Charles Gerhards, Director of Central Management Information Center, and Matthew Carey, Manager of Year 2000 Initiative, were both appointed by Larry Olson, the CIO of the Commonwealth, to work in-depth in resolving the Year 2000 problem. In addition to Gerhards' titled position, he was also appointed as the Year 2000 Coordinator. Gerhards put together the

Commonwealth strategy plan to remedy the Year 2000 problem and he is in charge of shepherding it over the next two years. Carey joined the team a couple of months later to help Gerhards; he keeps in touch with the agencies on a daily basis and handles many of the day-to-day operations.

Before Larry Olson joined the Commonwealth in June 1995, there was a limited amount of 2000 work occurring. The changes that had taken place occurred only in programs that were starting to encounter Year 2000 processing. Within six months after Olson came on board, Year 2000 was identified as a major problem. In August 1996, a strategy and plan was released for the forty agencies within the Commonwealth. The plan was formulated so that agencies would be more proactive; they would go out and find the programs with problems and would schedule a time frame in which to fix them, instead of just waiting for them to break before fixing them.

By June 1998, the agencies are to have all mission critical programs corrected and tested; and by December 1998, the non-mission critical programs are to be corrected and tested. At the moment



Robert Crothers, the Deputy Director of the Office of Administrative Systems here at Penn State said Penn State has been actively working on the Year 2000 problem for more than two years now.



Charles Gerhards, Director of Central Management Information Center, and Matthew Carey, Manager of Year 2000 Initiative, were both appointed by Larry Olson, the CIO of the Commonwealth, to work on resolving the Year 2000 problem.

they are on schedule, and though they are doing fine Gerhards admits that, "it is going to be a tough two years." As of this past January 31, Gerhards received the final plans from all the agencies. From hereafter, every month, the agencies will send an electronic template indicating which plans were corrected and Gerhards will measure that against which programs should have been corrected. Besides checking programs for those that need to be updated, Gerhards also encouraged the agencies to use this as an opportunity to clean house—to get rid of programs that have outlived their usefulness.

In the outreach program that has been designed, Gerhards not only helps fellow government agencies, but is also lending a hand to businesses within Pennsylvania. He has conducted meetings with CIO's of different companies to help them strategize plans to deal with the Year 2000. In order to get the word out to everyone, the Administration has created a Web site so that people can learn more about the year 2000 and can get some helpful plans and tips. The

Web site is located at the following URL: <http://www.state.pa.us/>

### **Good, bad, and ugly**

With the entrance of a new millennium, many people have been wondering what new technology and trends will surface. John Kalbach, the Lead Research Programmer at the CAC discussed what technology he thought was coming in the first five years of the Year 2000.

*On the good side* he cited an increase in the use of network computers—they are low cost, easy to set-up, and you won't need to upgrade. Virtual Reality Caves, which are already in use by researchers, will be improved. Many of you have probably seen the commercials on television promoting video conferencing. Kalbach predicts that there will be an improvement in compression so that the picture will be less jumpy. The picture will be improved and therefore, video conferencing will be in greater use. Graphics, sound, and other visualization technologies will improve. There will be a larger use and audience of laptop computers. Electronic commerce "will get

off the ground"—people will have easier access to banking and shopping on the Web.

*Now for the bad:* Kalbach predicts that forging mail will become more of a problem, and to safeguard against it people will use electronic signatures. He predicts that the amount of information on the network will be a problem. Because of excessive personal information on the Internet, Kalbach fears that the privacy and security of individuals will be endangered—for example, road maps to people's houses will be easily accessible to anyone. Credit card security is another concern—problems with theft of credit card numbers through the Internet may increase.

*And finally, the ugly:* Computer ethics will be an ongoing concern for everyone who is a computer technology veteran. They are concerned because they feel that people are misusing the Internet, which was initially intended for research—libraries were to be available at one's fingertips, researchers were supposed to be able to share ideas. Now it's feared that the Internet has become a dangerous playground for criminals. Parents need to shield their children from the influence of pedophiles, pornography, and other unsavory aspects of the Internet. Commercialization, junk mail, and misrepresentation abound. However, the bad influences don't outweigh the good, and there are many benefits to be gained.

It's clear that the Millennium dilemma is the least of our worries. If the world plunges into chaos at the turn of the century, it's safe to say that a couple of numeric characters representing the Year 2000 won't be the cause.

One thing won't change. In the 21st century, as now, we will need to be educated users of computer technology. ☒

# Virus Hoaxes — The Latest Threat

by Gerry Santoro

As all computer users should know, computer viruses exist that can destroy program and data files, resulting in a potential loss of their work and investment.

Purchasing and installing current commercial anti-virus software provides protection from viral attack. Making backup copies of software and data files provides additional protection from hardware failure.

However, a new threat has arisen to disrupt unwary computer users. This threat is the virus hoax. Virus hoaxes operate by taking advantage of a computer users lack of technical expertise. A virus hoax is basically an untrue account of a “new” virus that is spread as if it were a valid alert. The account is written in such a way that it appears very urgent and very scary. The recipient is encouraged to forward the hoax to all of their network contacts.

Since the recipient lacks the technical expertise to determine the validity of the alert, they will tend to do as instructed and forward copies of the hoax to anyone possible. This results in a pyramid-type mass mailing that results in unnecessary fear and confusion.

The most popular current hoax goes under the names “Good Times,” “Deeyenda” and “Penpal Greetings.” This hoax claims that a virus with one of the above names is being distributed through electronic mail, and that simply receiving the mail will result in a damaging virus infection.

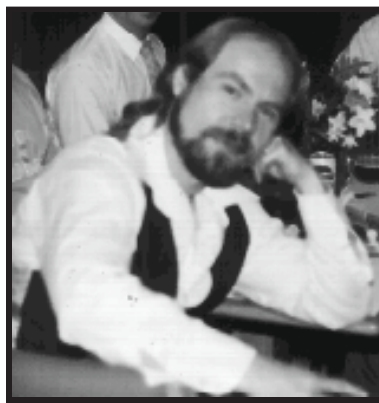
In fact, one *cannot* get a virus infection simply by receiving and reading electronic mail. The *only* way to get a virus through elec-

tronic mail would be if a binary attachment were received and either executed or opened as a data document. It is this additional step (executing or opening the attachment) that must be intentionally done before any virus could infect the users system.

The safest way to deal with *any* E-mail attachment is to scan it with current commercial anti-virus software *before* executing or opening it. If you receive an unsolicited attachment, especially if you receive one from someone you do not know, you may want to simply discard it.

If you receive a virus alert and cannot verify its validity, you should forward it to someone with who has the resources to verify it. One good source of anti-virus information is the Penn State Anti-Virus Resource Web page located at the following URL:

**<http://cac.psu.edu/~santoro/cac/virus.html>**



*Gerry Santoro is a lead research programmer with Penn State's Center for Academic Computing and an Affiliate Assistant Professor in Penn State's Department of Speech Communication.*



## Millennium viruses?

So what other problems should computer users be aware of and on the lookout for as the new millennium approaches? Viruses—date-oriented time-bomb viruses to be exact. Dr. Gerry Santoro, editor of the virus page on the Penn State World Wide Web site, and a Professor in the Department of Speech Communication, says that date-oriented time bombs typically target dates like Friday the 13<sup>th</sup>, April Fool's Day, Halloween, and Michelangelo's birthday. Dr. Santoro has not yet come across any known viruses that are targeting the millennium change; not any that have been discovered anyway. But he stated, “It wouldn't surprise me that as we get closer to the millennium, people start writing viruses that would have that particular time date on it.” When asked how he checks for eventual Year 2000 viruses, Dr. Santoro replied that he is “on a conference that connects all security people at universities and in the government, pretty much around the world. It's a network of virus researchers, and as new things are discovered, they announce them to people.” Visit the virus page frequently at **<http://cac.psu.edu/~santoro/cac/virus.html>** to keep yourself aware of any new viruses or hoaxes.

—By Rebekah Robertson



## Opinion Poll

I took an opinion poll in my English Senior Seminar course asking fellow English majors what kinds of technology they thought would surface in the Year 2000. Here's what some of them had to say:

"I think there will be video conferences as a normality. I think that anyone that has not learned about all of this [computers] will have virtually no place in the workforce." —*Beth Birmingham*

"There will be picture phones, a World-Wide Web supermarket, and mega-fingerprinting for identification." —*Meredith Burke*

"The overriding themes appear to be smaller and faster. I haven't seen any derivation in that over the last five years or so. Computers will be able to be pulled out of our pockets and capable of doing anything in a few minutes." —*Blair Schwartz*

"My father, a man who lives and dreams computers, has been predicting future technologies ever since I can remember. And, of course, he is always right. His prediction at this point is everyone will have a computer by the year 2000. And, most of the population will work from their home on their computer. Personally, I think computing will have major consequences on future lives—it is going to make everyone lazy and fat." —*Jessica Moore*

"There will be finger printing identification software, enhanced laser medical technology, keyboards will be eliminated and mind thought will be transmitted onto the screen." —*Stephanie Difilippo*

"I believe that computers will get smaller and smaller and have larger capabilities—laptops and hand-held computers will have the same capabilities as today's full-sized

computers. Also, the glitches of the experimental hand held computers that translate handwriting into a formatted text will be worked through. But other than that, not much more will change in three years." —*Heather Feinberg*

"I think they will be super-fast! Also, I think computers will lose the keyboard—people will just be able to talk into the computer. I also think computers will be used

everywhere—self-serve grocery stores, etc." —*Beth Young*

"Everyone will have a laptop or something smaller, and all class work—including tests—will be taken on it." —*John Raytek*

As for myself, I am relying on the perfection of the voice-capable computer so that I can throw my keyboard out the window.



### Rebekah Robertson, Writing Intern

I am a senior here at Penn State majoring in English and minoring in Horticulture. This semester I am doing an internship with the CAC designing the Windows/IBM Web page, and writing articles for the CAC newsletter. I graduate in December 1997 and I plan to go on to graduate school to study American Studies. In my future I hope to write a book about Race and the Inner City and continue to work on bridging the lives of Blacks and Whites.

As a student I do not really have a large amount of excess time to pursue my personal interests, but I do

enjoy art very much and sometimes escape into my own drawing and water color. When I read outside of class I enjoy books on History, Women's Studies, Race, and Cultural Studies. I do love nature and I look forward to, after graduation, moving to a year-round warm climate. I plan to never marry and I abhor children, but I assume that shortly before my biological clock runs out this will all change. At this point what I most look forward to is owning a car again and having my own home; I never want to share a kitchen with six other people again.



# Images We Love And Hate

by James Molony

So you want to make a Web page, or at least you are required to do a page for one of various reasons. You do not want to be responsible for creating another site unfavorably termed “Internet road kill.” You have some HTML experience but you’re not sure about graphics. File formats, screen resolutions, dozens of applications. What do you do?

You’re not going to learn all the “need to know” material in one article, but we can cover some of the basics.

One of the first things you need to understand about the Internet—bandwidth. What is it? For our concerns, bandwidth is the speed at which files are transferred from the server to the browser. What does this mean for the user? Time. Every file takes time to load and the larger the file the more time it takes. As a rule it is best to avoid using more than four image files per page. It is also a good idea to keep each file under 25K. “K” in computing terms is kilobytes. There are 1,024K in a megabyte.

## **Come on! How do I get my files to be under 25K?**

Well, fortunately there are two common file formats that assist us with getting the file sizes down. These .jpeg and .gif files can be created from most graphic applications. The .jpeg (.jpg in windows) file format is recommended for images that use a large palette (such as photographs). The .gif file is recommended for images that have large areas of few colors (images with fewer than 256 colors such as logos, charts, buttons, etc).

## **I have an image we used in our publication. Can I use it on the web?**

The answer for this is probably “yes” (at least technically speaking – see the last paragraph). Most file types can be converted to the .gif or .jpeg file type. You should keep in mind that most image files that go to print are set to a print resolution—usually 300-600 dots per inch (dpi). The resolution used for print is not necessary for the Web as browsers display your images at 72dpi. Reduce the resolution of your image before finally saving the file as a .gif or .jpeg (in Photoshop see “Image Size”). Saving your print copy and then saving your .gif/.jpeg will preserve your original. You can make changes to the print copy later while still maintaining a .gif/.jpeg file for Web use.

## **People keep going to my page but they don’t see any of my images.**

There are several possibilities as to why this could occur.

One common answer is that the user may be operating a text only browser or may have the “auto-load images” option turned off. This is why it is always a good idea to include the “ALT” tag within your image tag. The ALT tag provides the user with alternate text that will be viewed in place of the image.

Another possibility is that you’ve transferred your image files in something other than “raw data” format to the server space. Images must be transferred “raw data.” Your .html files should be transferred as “text.” These are just a few


reasons for testing your pages on other machines and with various browsers. It’s a free world out there and people might not be getting your message.

## **I have some beautiful graphics I loaded from another site. I E-mailed the person who made the pages and they said I could use the images.**

That sounds fine, but before you go and post the images make certain that you really were communicating with the individual who holds the copyright for those files. One of the pluses that the Web provides for us is that spirit of open communication. That does not mean you can take what you want as you want. It does mean you must be careful and take the time to verify the source of that information or image. Copyright liability is an issue on the Web and you are liable for the information you publish. You are also a member of a community which will shape the future of the Web. Make certain you understand your responsibilities and act accordingly.

Please refer to the URL <http://www.psu.edu/computing/policies/> for policies and guidelines.

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*Jim Molony is Senior Microcomputer Systems Consultant for the Consulting, Training, and Outreach group and Webmaster for the Center for Academic Computing.* 



# Teaching and Learning with Technology

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## Symposium

Are you looking for innovative ways to improve teaching and learning? Are you interested in hearing success stories about the use of information technologies? Do you want to hear about new tools and strategies for collaboration and educational multimedia? If so, attend the Fifth Annual Teaching and Learning Symposium in April.

This symposium is designed to feature ways to improve students' learning through the use of technologies, collaboration, communication, and reflection. The program will include concurrent sessions presented by Penn State faculty, staff, and students.

The symposium will feature as keynote speaker Sally Jackson, Director of the Communication Collaboratory and Acting Head of Communication of the University of Arizona. See page 19 for additional details.

## Seminars

There are still several opportunities to explore processes and software for supporting teaching and learning. There are no prerequisites for the following seminars. To register, go to <http://cac.psu.edu/training/> on the World Wide Web or call 814-863-4356 for a paper registration form.

### Using Technology Classrooms

*T. Morrow, M.W. Stout*

This seminar will provide a forum for discussing current configurations of technology classrooms and studios. The seminar is intended for both current and prospective users of the technology classrooms. The recently developed World Wide Web page (<http://classrooms.cac.psu.edu/>) for scheduling general purpose and technology classrooms will be demonstrated. Input will be solicited for determining future needs of faculty and students.

**Class Schedule:** #08123

April 4, 9:00 a.m. to 12:00 p.m.

141 Computer Building

### Using WISH

*M.W. Stout*

Web Instructional Services Headquarters (WISH) is a collection of information technology services for faculty. Faculty can request class lists for gradebooks, listservs, or mailing lists. It also contains CourseWeb, which allows faculty to create powerful course pages for use in the classroom. CourseWeb is a simple-to-use Web program that allows teachers to easily create dynamic Web documents that take full advantage of Internet technologies. It permits faculty to fill out a simple Web form and it generates all the necessary coding.

**Class Schedule:** #08126

April 23, 9:00 a.m. to 11:00 a.m.

141 Computer Building

### Assessing Team Projects and Student Teams

*C. Logan, The Shreyer Institute; C. Dwyer*

So you'd like to have students work in teams on projects. But you wonder how you will fairly assess individual contributions to group outcomes. What's important to evaluate - the quality of the project? Students' thinking processes? Team dynamics? Content knowledge gained? Come to this seminar to gain some tips on evaluating team projects, measuring knowledge and development, and assessing the contributions of team members. Note: This is not a computer-based class.

**Class Schedule:** #08125

March 24, 9:00 a.m. to 11:00 a.m.

141 Computer Building



*Noted University of Arizona  
Communication Professor to Give Keynote  
Speech at the Fifth Annual Teaching and  
Learning with Technology Symposium.*

## **Sally Jackson**

<http://www.comm.arizona.edu/sjackson/sajhome.html>

### **Background**

Sally Jackson, Director of the Communication Collaboratory and Acting Head of Communication of the University of Arizona, will be the keynote speaker for this spring's Teaching and Learning with Technology Symposium. The Communication Collaboratory is a networked classroom located in the University of Arizona Communication Department. It also houses a variety of research and development projects related to communication technology, especially *POLIS* (Project for On-Line Instructional Support), a unique resource for collaborative learning.

Jackson's keynote speech will focus on sharing with Penn State the planning, design and development of *POLIS* and how on-line resources contribute to improved teaching. *POLIS* is both an on-line instructional resource for students and an on-line support tool for instructors. *POLIS* can be used to put up interactive lessons and other

materials on the World Wide Web. This type of learning environment contributes to improved instruction by making materials available from any Internet access; by allowing individual tailoring of instruction to student needs and interests; by stimulating more active engagement with the course material; and by creating more space for discussion, debate, and intellectual exchange.


Jackson holds a Ph.D. in Speech Communication from the University of Illinois at Urbana-Champaign. Before going to Arizona, Jackson taught at the University of Oklahoma, Michigan State, and the University of Nebraska-Lincoln. Jackson is the author of numerous articles and books as well as the recipient of various teaching and research awards, including an Instructional Computing Grant to build a classroom specially designed to support collaborative learning. Her main research focus is on Argumentation.

### **Registration**

This year's Fifth Annual Teaching and Learning with Technology Symposium will be held on Saturday, April 5, 1997, from 9:00 a.m. to 4:30 p.m. at the Joab Thomas Building, University Park. This event, sponsored by Education Technology Services of the Center for Academic Computing, and co-sponsored by the College of Education, Deasy Geographics Laboratory, Engineering Instructional Services, the Center for Learning and Academic Technologies (CLAT), and the IDP Center for Excellence in Learning and Teaching, is a forum for sharing ideas and experiences in using technology for University level instruction.

To register, please contact Jean Cowher at [ajc@psu.edu](mailto:ajc@psu.edu) or (814) 863-4356. You may also register via the World Wide Web at the following URL:

**<http://cac.psu.edu/training/>**

Please contact Karen Peters at [kmp138@psu.edu](mailto:kmp138@psu.edu) or at (814) 863-7763 or 863-5770 with any questions related to the Symposium. 

# Meet the Help Desk

Graduate Assistants and undergraduate students provide the CAC's front-line support at two Help Desks, eleven lab locations, and fourteen residence halls.

In this issue we are proud to introduce the Graduate Assistants who work at the Computer Building Help Desk.

## Ganesh R. Iyer

*Mechanical Engineering*



I have been working at the Help Desk as a computer consultant since Fall 1992. In this position, my primary

responsibility is to assist clients—faculty, staff and students—with various computer related problems. During my tenure at the desk, I have worked on a wide range of applied research problems, which involved programming in FORTRAN and writing command files in statistical packages such as SAS and SPSS. Recently, I have predominantly answered questions regarding connecting to the Internet. I would like to emphasize that we are backed up by a very able full time staff who assist us in case we cannot resolve a problem. On a less serious note, I should point out that we also get a question or two about health insurance!

I grew up in Ahmedabad which is a big city located in the western part of India. It is a part of the state of Gujarat, where our great leader Gandhi was born and brought up.

Here, I completed my Bachelors degree in Mechanical Engineering before I came to the U.S. for graduate studies. I completed my Master's degree in Mechanical Engineering from Penn State and I am pursuing my Doctorate in Mechanical Engineering and a Master's in Aerospace Engineering concurrently. My doctoral research focuses on simulation of flows typically encountered in turbomachinery. I plan to graduate by Fall 1997.

In my spare time, I like watching movies, both Indian and American. I also enjoy playing badminton, traveling and listening to music. I have been involved in the Indian Student Organization here at Penn State. I served as its president for a year, but lately haven't found the time to be involved in such activities. Last, but not the least, I have a terrific wife Anju who always makes me feel that life cannot get better than this.

## Mduduzi Keswa

*Computer Science and Engineering*



I earned a Mathematics degree from Dartmouth College in 1992. This semester I will be graduating with a

second Master's degree from the Computer Science and Engineering department here at Penn State. My areas of research are medical imaging and computer visualiza-

tion. I am a member of the Vision and Image Processing Lab at Penn State. My other memberships include the American Mathematical Society (AMS), ACM, and the African Student Association.

I have worked at the Help Desk for almost three years. I certainly have enjoyed working with resourceful and supportive staff. My responsibilities vary from answering the phone to scientific computing consulting for graduate students, faculty, and staff.

## Susan Craig

*Administration of Justice*



I have been an employee of Penn State University for sixteen years working in various positions.

While working full-time, I completed a B.S. in Individual & Family Studies and a M.Ed. in Counseling Education along with putting three of my five children through Penn State. I left my full-time position as Financial Aid Advisor in 1993 to complete my Ph.D. in Administration of Justice. Last year I worked at the Women's State Correctional Institution in Pittsburgh, establishing the first domestic violence therapeutic community in a prison. This opportunity provided insight into my dissertation topic of women in prison.

I began working as a computer consultant at the Help Desk Spring 1997 because of my interest in computers and computer programs. I enjoy the challenge of helping others solve their computer problems while gaining my own experience.

In addition to doing research and teaching in the criminal justice system, I love to travel and spend time with my family.

## Mark Motivans

*Crime, Law and Justice*



I joined the Center for Academic Computing Help Desk in January 1997. My responsibilities include assisting

students and faculty with their questions on accessing the Internet, helping install new software, and troubleshooting statistical programs. I enjoy the collaborative atmosphere at the Help Desk and working with others to solve challenging computer-related problems. The diversity and expertise of the staff provides an interesting and stimulating work environment.

I received a B.S. degree in Sociology from the University of Wisconsin-La Crosse and a Master's in Criminal Justice Studies from St. Cloud State University, St. Cloud, Minnesota.

I am a graduate student in the Crime, Law and Justice Program in the Department of Sociology. My specific areas of interest include communities and crime, juvenile delinquency, corrections, and technology in criminal justice. When I'm not at work, I enjoy exploring central Pennsylvania with my wife, two daughters and

golden retriever. I also enjoy running, playing the guitar and browsing the Internet.

I will be discussing my research: "Social Disorganization Theory and Homicide Rates in European Countries" at the Twelfth Annual Graduate Research Exhibition on March 21-22, 1997 in the HUB Ballroom. My study attempts to determine whether social disorganization is related to homicide rates across European nations.

## Julie Perco

*Comparative Literature*

I come from Trieste--a very windy city on the Adriatic Sea, on the border between Italy and Slovenia--but I also lived and studied in Dublin (Ireland), München (Germany), Albany (NY), New York, and State College.

I first came to this country (to Albany, to be precise) a few years ago on a Fulbright scholarship. I graduated from SUNY Albany with a Master's degree in English and, after a year in New York, I came to Penn State where I have been working towards a Ph.D. in Comparative Literature. I have been at Penn State for almost three years and, before joining the Help Desk staff, I taught literature and foreign language courses. This is my first semester as a computer consultant at the CAC Help Desk, where I have been primarily answering questions on internet connections. Despite my passion for science fiction, which should have taught me to distrust computers, over the years I have learned to appreciate them more and more—so much so that my current research project deals with, among other things, hypertextual narratives. I enjoy reading (my favorite author is James Joyce), traveling, watching movies, and I have an unconditional love for cats,

especially the stray, sick and sorry-looking ones who always manage to "adopt" me somehow.

## Shekhar A. Deodhar

*Mechanical Engineering*



I have been working as a Help desk consultant at the Center for Academic Computing since January

1997. My job involves helping people with their computer related difficulties usually over the phone and via e-mail. Questions received at the desk cover a wide variety of computer platforms and software. If the problem is too complicated and cannot be resolved over phone or by e-mail, I tell people to bring their computer to the desk so that I or someone else can have a look at it. My colleagues and the full-time staff are very friendly and are always helpful when I am not able to solve a problem on my own. The variety of problems encountered is something that interests me and lets me learn a lot of new things.

I am a doctoral candidate in Mechanical Engineering and am planning on completing my studies before the end of this year. My research is in vehicle force measuring transducers, and it has involved a lot of work in PC based real-time data acquisition. I had about three and half years of experience in industry before I started my present graduate studies. I am originally from Pune, an industrial city in western India. However, I have lived in various parts of India and am fluent in four regional languages.

My pastimes include (but are

not limited to) watching movies, hiking, traveling, listening to music, and reading. I find it important to add that my wife Medha is a perpetual source of support in whatever I do. I plan to take up a consulting career and my present job is preparing me for it very well!

## Gail Rishel

*Agricultural and Extension Education*



I am a Graduate Student in the Department of Agricultural and Extension Education. So, of course, I'm a

shoe-in for the position of CAC Help Desk consultant! Non-formal education is a strong component of extension education. This background is very helpful in this computer support position. After a year as Help Desk consultant at the Willard Building, I had an opportunity to move to the Computer Building help desk in August 1996. My current graduate assistant position allows me to continue classes toward my Master's degree. At the same time not a work day goes by without learning more about computers and related technology. The most important aspect of this position is not knowing everything there is to know about computers. Obviously, this is impossible. What is more important is knowing where the information may be found. This may sound like a cliché, but in the Help Desk business, it's a survival tactic! ☺

# Consulting Services

## Help Desk

Walk-in, phone, or electronic mail computer consulting is provided. Consultants can assist computer users with general computer questions. Note that consultants are not permitted to help students with course work. The Help Desk can be reached by E-mail at [helpdesk@psu.edu](mailto:helpdesk@psu.edu)

The hours listed are for spring/fall semester while classes are in session. At other times hours may vary. If in doubt, call before visiting.

### **215 Computer Building (814) 863-2494**

**Mon.–Fri. 9:00 a.m.–5:00 p.m.**

The Computer Building Help Desk specializes in the following areas: Access Accounts, Internet clients, communication software, E-mail software, mainframe systems support, numerically intensive computing, programming languages, file transfer, thesis formatting, visualization and graphics, VM/CMS, UNIX, and scanning.

### **12 Willard Building (814) 863-1035**

**Mon.–Fri. 9:00 a.m.–4:30 p.m.**

**Sun.-Thur. 7:00 p.m.–10:00 p.m.**

The Willard Help Desk specializes in the following areas: Access Accounts and Internet clients, communication software, disk recovery, graphics packages, E-mail software, hardware and software diagnosis, microcomputer applications, virus detection and prevention, and scanning.

## Consulting at Labs

Consulting staff at computer labs in the following buildings can assist with Access Accounts and lab equipment, software, and printing: 1 Beaver, 103 Boucke, 205 Chambers, 6 Findlay, 316 Hammond, 209 Lasch, W111 Pattee Library, 106 Pollock Library, 112 Redifer, 212 Rider, 15 Sparks, 107 Waring, and 108 Warnock. Hours are Sunday through Friday from noon to 4:00 p.m. and Sunday through Thursday evenings from 7:00 p.m. to 11:00 p.m. (except Lasch Building, which has no evening consulting hours.)

# CAC Systems & Services

# Update

## PSUVM service changes reminder

Internet services for electronic mail, Netnews (Usenet), and Gopher will be removed from the IBM mainframe system by June 30, 1997. I-account service will also be affected by this change.

There are a number of reasons for changing the service on PSUVM:

- The distributed computing environment has matured and stabilized.
- Students have expressed concern about having to use a mainframe account for a single course when they already have an Access Account. This forces those who are unaware that services are duplicated to learn a new computer system for a single course, and burdens students unnecessarily. More than 75% of the student population is now using Access Accounts for E-mail and Netnews.
- All students, faculty, and staff are eligible for an Access Account. This account enables access of the full range of Internet services on Macintosh computers, Windows PCs, and UNIX workstations. Services are accessible on or off campus, in computer labs, or while traveling.
- Access Accounts remain active

until six months after graduation or until termination of employment. PSUVM accounts expire after a semester or designated period of time, and may require periodic renewal and University funding.

- Having duplicate accounts and systems places a considerable load on scarce resources within the Center. We simply do not have staff available to support multiple systems that serve the same function.

## Software for Personal Computers

Following are suggested alternate packages for IBM compatible or Macintosh computers. Students, faculty, and staff can obtain these packages free of charge by FTP or at the CAC Help Desk in room 6 Willard Building. Five high-density diskettes are required for the complete Internet access packages: CACTWIN for the IBM compatible, or CACMAC for the Macintosh. These packages include E-mail and Netnews clients.

- **Eudora for E-mail:** The free client Eudora Lite is included in the CAC Internet access packages. Eudora Pro, a commercial version with added features, is available through the Microcomputer Order Center.
- **Netnews (Usenet) Clients:** Netnews (Usenet) can be

accessed on the Macintosh with Internews, which is included in the CACMAC package. Trumpet Winsock is included in the CACTWIN package; however, Windows users can use Free Agent or NewsXpress if they prefer.

- **Gopher Access:** Penn State information on Gopher is now being moved to the World Wide Web. Those who wish to use Gopher as a separate client can obtain TurboGopher for the Macintosh or Hampson's Gopher for Windows.

## Instructional Account Changes

The CAC no longer provides "I-accounts" on PSUVM unless the faculty member identifies specific software or resources available only through PSUVM. I-accounts will continue to be provided for non-PSUVM services, such as UNIX accounts or CAC Web space accounts. An "I-Account" application form can be obtained from the Computer Accounts Office.

## New utilities for VM E-mail conversion

Two new tools have been developed to help users of E-mail on PSUVM convert to Eudora, an E-mail package for the Macintosh and Windows systems.


- The command **MAILBOX** used on the VM system will format a VM notebook as a Eudora mailbox. If you're on a Macintosh, WMAC is then invoked to down-

load the mailbox. For Windows, the file is left on VM. Issue the command **HELP MAILBOX** on VM for more information.

- The command **EUDORA** used on the VM system extracts VM nicknames from the user specified filename and reformats the nickname entries into a format suitable for use with Eudora on a Macintosh or Windows system. Issue the command **HELP EUDORA** on VM for more information.

### Information and Assistance

For information on using Internet services at Penn State, see the publication *Internet Access Guide*. Copies are available at CAC Help Desk locations in 6 Willard Building and 215 Computer Building. To obtain copies by campus mail, contact Danette Yakymac at (814) 865-4757 or send E-mail to [dxs8@psu.edu](mailto:dxs8@psu.edu).

If you need assistance, contact the CAC Help Desk; locations and hours are listed at the left. 

Faculty who want to integrate technology into the learning process can make an appointment to discuss their needs with FMC consultants. They can also come to the FMC and use the equipment to digitize their own materials, or arrange to drop off their materials for FMC staff to digitize, all free of charge.

The FMC is part of the Penn State New Media Centers (InterPaws) and is provided as a service of the Center for Academic Computing. The FMC has relocated to 226 Computer Building and its facilities are available by appointment Monday, Wednesday, and Thursday from 9:00 a.m. to 5:00 p.m. Send questions and requests for appointments to [fmc@psu.edu](mailto:fmc@psu.edu) or call 863-7051. For more information, visit our Web site at the following URL: <http://stingray.cac.psu.edu/fmc/>



## Faculty Integrated Media Center (FIMC) Update

The Faculty Integrated Media Center has been renamed the Faculty Multimedia Center (FMC). At the FMC, Penn State faculty and their staff can receive help integrating technology into the learning process. For example, if a faculty member has videotape, 35mm slides, or pictures for use in a Web page or classroom presentation, the FMC can help transfer these materials into computer formats.