

# High-Speed High School



**The Mankato West High School team (left to right): Kathy Jensen, Doug Johnson, Mike Durbahn, Bob Ihrig, Jean Jirak.**

**R**ECENT REPORTS indicate that two-thirds of U.S. schools are now connected to the Internet. However, many teachers have learned that simply being connected is not enough. Slow, unreliable connections, increased demand on network services, and limited access opportunities often turn the vaunted World Wide Web into the World Wide Wait.

And with some teachers struggling to get online in the first place, it's still difficult for many to picture how a classroom with truly seamless and integrated Internet access might work.

What can teachers do when they can reliably connect to the Web, and at lightning-fast speeds? How are schools transformed when students can travel from site to site as easily as they might channel surf through TV stations at home? What does it mean for the classroom when technical limitations of speed, reliability, and access are essentially taken out of the equation? In Mankato, Minn., where the local Bresnan Communications cable company has helped schools do exactly that, it means that teachers are finally free to forget about the hassle of *getting* online and can concentrate on the advantages of *being* online.

Last year, Bresnan Communications built a network

*How high-speed Internet access changed the way teachers teach and students learn in one school district.*

*By Jeff Carter*

connecting all of the schools within Mankato's Independent School District 77, providing the district with high-speed, point-to-point data transmission as well as the infrastructure necessary to access the Internet via cable modems. "We've got as fast a network as anybody around," says District Media Supervisor Doug Johnson, "and just about any computer you sit down at is going to be automatically connected to the Internet."

Johnson emphasizes that reliability, even more than speed, has been a key factor in encouraging teachers to use this technology. "I think Bresnan understands why systems have to be reliable," he says. "If you get teachers all pumped up about using the Internet, and then it doesn't work, it's really tough to get them to go back and do it again. It's doubly hard to get somebody who may be reluctant about using technology anyway to come back if they know it's not reliable. We're trying to help make technology as transparent as possible, and Bresnan helps make that happen."

In addition, notes Kathy Jensen, business-education teacher at Mankato West High School, the reliable, high-speed access provided by Bresnan makes it a lot easier to use the Internet in what is typically a 48-minute class period. There's no dialing,

no busy signals, and very little down time on the network. "You're pretty darn sure it's going to work every day," she says, "and that you can get someplace and get something done in the short time period that you have."

Jensen marvels at the transformation of the personal finance and consumer course, Taking Care of Business. In the past, teachers relied almost exclusively on textbooks that inevitably lacked the most current or relevant data. Now students can go online and find local, up-to-date information, which she says is more appropriate for what they are trying to accomplish for the course. During the housing unit, for example, they went online to find the latest information on housing and apartments in their area. When it came time for learning how to buy a car, open a bank account, and obtain personal credit, students used the Internet to find the latest consumer information in those areas as well.

The Computer Applications course has undergone a similar transformation. Career research projects have been taken to the Internet. "They go out and actually do most of their research about careers on the Internet, and again, that way they are getting really current information," Jensen says. "In the past, I had to send them to the library to do that kind of thing, and the information was not as current, nor could they get the information as quickly."

#### Doug Johnson

Mankato Area Independent School District 77  
District Media Supervisor  
djohns1@mail.isd77.k12.mn.us

Mankato West High School  
1351 South Riverfront Dr.  
P.O. Box 8713  
Mankato, MN 56002  
(507) 387-3461

#### Mike Durbahn

Subject: Technical education

#### Bob Ihrig

Subject: U.S. history, debate

#### Kathy Jensen

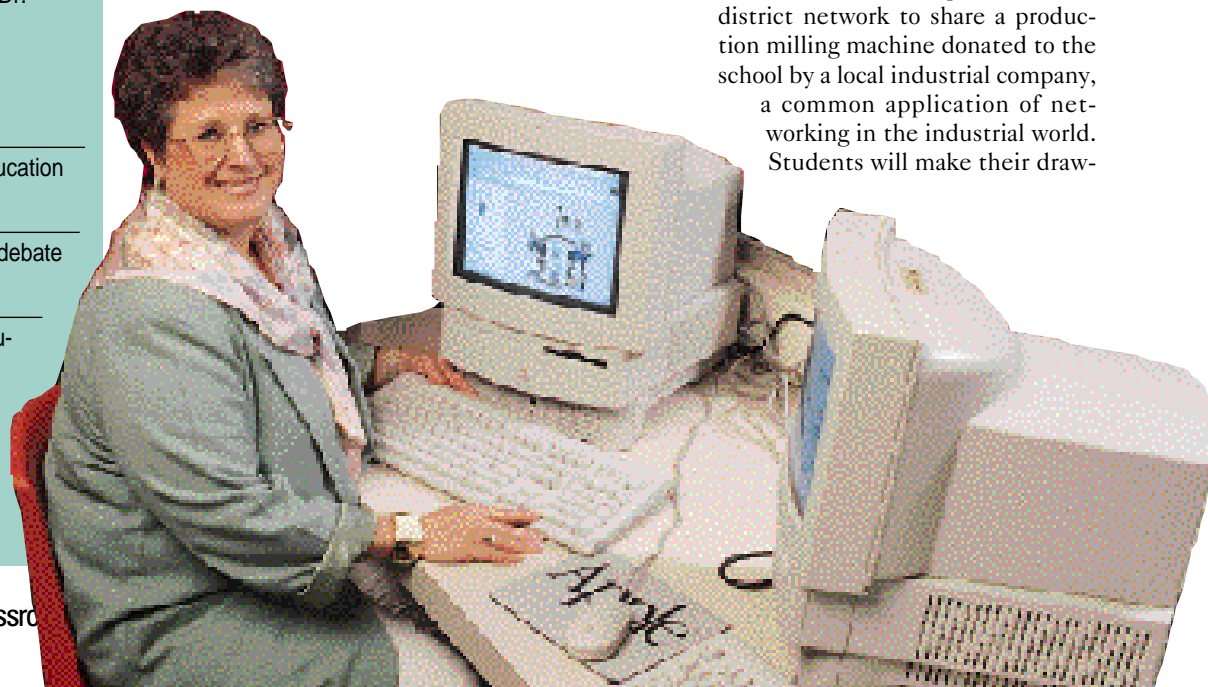
Subject: Business Education Dept. Chair

#### Jean Jirak

Subject: English  
Cable provided by:  
Bresnan  
Communications

**No dialing, no busy signals, and very little down time. "You can be pretty darn sure it's going to work every day, and that you can get something done in the short time you have."**

**Mankato West business-education department chair, Kathy Jensen**



U.S. history teacher Bob Ihrig's students also use the Web as a research tool, but for a very different purpose. With English teacher Jean Jirak, Ihrig co-teaches a unique unit on World War II and the Holocaust. Focusing on the similarities between Nazism during World War II and modern hate groups in America, students use the Internet to obtain information about these contemporary groups, many of which have their own Web sites (see accompanying story, page 11).

Of course, unlimited access to the Internet does require a certain number of ground rules. Outside of classroom activities, Mankato relies on a strict acceptable-use policy in which all of their students must be "licensed" before they can use the Internet. Licensing involves teaching students proper computer use and Internet etiquette. Students are taught not to use school computers for viewing what the school has deemed offensive, unless it is part of a school project that's being directed by a teacher, such as the one in the course taught by Ihrig and Jirak. If they violate those rules in any way, they lose their license, which means they lose their access to the Internet. "We're not playing a game of censorship, or trying to be the Internet police," says Ihrig, "but we just think that we need to establish those ground rules, so that parents have some sense of security and confidence in what their kids might be exposed to."

Technical education teacher Mike Durbahn has less controversial practices in mind. He tries to use networking in ways that actually reflect real-world practices in industries his students might enter, such as precision metal working, electronics, and machine shops. For example, next year Durbahn and Mark Seiler, his counterpart at another district high school, Mankato East, plan to use the district network to share a production milling machine donated to the school by a local industrial company, a common application of networking in the industrial world. Students will make their draw-

# Defusing Online Dangers

*Critical thinking, not censorship, is the solution for dealing with controversial content in a Mankato West history class.*

**One of the issues that bedevils schools** and school districts when it comes to the Internet is how to protect kids from potentially objectionable material. At Mankato West High School, two teachers have come up with an innovative approach to tackling this problem.

For the past four years, Mankato West history teacher Bob Ihrig has partnered with English teacher Jean Jirak to design a number of cooperative projects that combine English with social studies, particularly in ways that connect history to current events. While preparing to teach a unit on World War II and the Holocaust, Ihrig noted that there had been a number of stories in the media in recent years about hate crimes and extremist groups in the U.S., and decided that this would be a perfect opportunity to take the history of the Nazis and relate it to the present.

Then Ihrig made another, more startling, discovery: A number of those organizations were using the World Wide Web to spread their message. In a school where almost every computer is connected to the Internet, Ihrig and Jirak decided that this was an issue that needed to be addressed. In fact, they designed a unit that would actually require their students to visit these sites. Ihrig explains, "I thought we might as well take this issue head on and deal with it in a critical way." Thus was born Intolerance and Hatred in Contemporary America, a unit that incorporates historical analysis, literature, video, and the home pages of the Ku Klux Klan and the United Aryan Youth, among others.

Students are closely supervised while completing their research, which is done during class time in the school media center. Ihrig asks his students to examine the messages expounded by these groups and compare them to 1930s Nazi groups. A worksheet that students fill out as they inspect the site uses a list of common characteristics of mass movements, such as the presence of an outstanding leader, the demand for blind obedience, and the use of hatred to unify the group. Students compare these points, which



are taken from Eric Hoffer's book *The True Believer*, to the groups they study to see whether these groups display the same characteristics. In addition, they study how these groups try to persuade people to their cause, often by appropriating popular advertising slogans that students are familiar with and twisting them to their own advantage.

The results so far have been encouraging. "The kids are drawing the conclusion that these groups are pretty scary," says Ihrig, "and that they tend to operate on the same kinds of principles as the Nazis." Ihrig says that he has also noticed that his students seem to be more aware of this issue in their daily lives. "They'll come in periodically during the year and say, 'Gee, Mr. Ihrig, I was just watching TV last night and they did a segment on this hate group that my partner and I studied.'"

Parents have been supportive of this approach. "We did put a letter out to the parents when we started this, but this year we didn't even send the letter out, because I think parents are becoming more and more comfortable with it," Ihrig says. "I think what parents fear is that kids are going to come across offensive material randomly, that there's not a controlled environment in terms of studying this information, discussing it, and looking at the flaws. Instead, we are using this as an opportunity for our students to use some of those critical thinking skills that schools are supposed to be promoting."

Ihrig clearly believes education, not censorship, is the key to helping kids navigate the sometimes treacherous backroads of the information superhighway, and his results back him up. "I've had a number of students really offended by what they read and what these hate groups are espousing," he notes, "and it gives me some comfort and some security knowing that students are reacting in this way. Their tolerance level is very low for what they are being exposed to here and they're ready to speak out on that. I want these kids to be questioning all the time." —JC

ings on a CAD (computer-aided drafting) system, and then run it through a CAM (computer-aided machining) program that tells the machine where to move and make cuts.

"They might even work on it together," Durbahn says, "where different parts of the program will be made in each school. If somebody in each class did part of the drawing, that would be the greatest because that would be like what actually goes on in industry." When it's finished, the class at Mankato East will transmit their programming down to Mankato West to make the part.

All of which will further what Johnson sees as the district's ultimate goal: to seamlessly integrate networking and the In-

ternet throughout the school system so that it supports good teaching. At Mankato West, once teachers were supplied with speedy, reliable access to each other and to the Internet, the number of ideas about how to use this technology in the classroom has been limited only by their imaginations, not their bandwidth.

"I've been in education for 22 years," Johnson says, "and I would say that having a network computer in the classroom has probably done more to stimulate participatory projects and activities that don't involve a textbook than just about anything I've seen." ■