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# Schools may get technology boost

## Alliance pushes Internet hookup

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PI REPORTER

Five months after the Seattle Public Schools' \$75 million technology levy failed at the polls, the outlook for high-tech learning is suddenly much brighter.

The business community, the city and the state all are launching efforts that could accomplish a key goal of the unsuccessful school levy plan — greatly expanding student access to the Internet.

If political and technical obstacles are worked out, many of Seattle's 47,000 students could use the Internet to research subjects and communicate

with people around the world, starting in the 1996-1997 school year.

The students would be riding a national wave of interest in boosting school technology, as demonstrated by the cable industry's newly announced decision to provide thousands of schools with Internet access free of subscriber fees.

But tough issues still need to be resolved in Seattle, including how to provide the increased electrical capacity and additional computers needed for widespread student Internet use, and how to coordinate all the different efforts to help the Seattle schools.

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# Schools: Plan calls for volunteers to wire classrooms

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"We have to be sure that we have a good plan," said Pat Kile, program director at the Alliance for Education, a group of local business leaders that is organizing a major volunteer effort to install wiring for the Internet inside Seattle classrooms.

The alliance project could eliminate the need for about \$16 million of the \$75 million in new taxes that Seattle voters spurned in February's levy election, said Les Foltos, technology coordinator for the school district.

Meanwhile, city and state plans to build new fiber-optic networks could save the district millions of additional dollars, although Foltos could not estimate how much.

While business volunteers are focusing on internal school wiring, the city and state networks could provide the high-speed external wiring needed to carry the Internet into school buildings.

"Anything we can get done with volunteers is just one less thing we have to spend (tax) money on," said Don Cowan, the district's information services director.

The alliance project is modeled after California's "Net Day," a March event that brought together thousands of parents, teachers and volunteer engineers to wire schools throughout the Golden State.

In Seattle, the alliance plans to recruit volunteers to install wiring for the Internet in as many classrooms as possible while school is out this summer and on weekends this fall.

Participants in the early planning include representatives of three dozen government agencies and companies, including IBM, U.S. West, Microsoft, Digital Equipment, Sun Microsystems, GTE, Battelle Institute and The Boeing Co., Kile said.

Rolling wires inside schools is a big first step in connecting students to the Internet. But the wires inside classrooms still must be linked to a wider communications network, such as a telephone system or fiber-optic network, outside of school buildings.

That's where city and state governments might help.

However, it's uncertain how soon their new fiber-optic networks will offer Internet access throughout Seattle schools. Rather than wait indefinitely, and risk disappointing the volunteers who are rushing to wire classrooms this summer, the school district may ask businesses to donate

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**- Don Cowan, district information services director**

via phone lines, said the district's Foltos.

"You're asking people to give money and time to come out and help wire a building," Foltos said. "You want to make sure that they can see a rapid return on their investment."

A large new fiber network will be built along major city streets over the next three years as part of the city's 10-year franchise agreement with Telecommunications Inc., the region's major cable television provider.

"It looks like the (TCI) system could potentially work to meet many of our needs," Foltos said.

But it will be at least six months before TCI can offer the new Internet service on a test basis to schools, homes and other cable TV customers. And few schools could take advantage of it during the next school year, said Bill Bennett, TCI's general manager in Seattle.

Once the new wiring is in place and schools are ready to receive the Internet, TCI will provide Internet access free of subscriber charges - part of a national industry initiative announced yesterday. TCI already provides free cable service in schools, Bennett said.

Meanwhile, the state is speeding ahead with plans for a new statewide fiber-optic network intended to link all public schools and colleges to the Internet and interactive TV.

Although Seattle schools aren't included in the first phase that was financed by the Legislature, "I believe there are going to be ways to work around that," said Ed Lazowska, chairman of the University of Washington's computer sciences and engineering department, who is helping to design the statewide network.

Lazowska said the backbone of the network could be in place as early as this fall. The Seattle Public Schools

wire individual classrooms and by financing its own link between the school wiring and the statewide network.

Few classrooms in Seattle now have access to the Internet, a computerized communication service offering a vast, worldwide web of information not available from textbooks. Of 97 public schools, 84 have no access at all, and only Martin Luther King Elementary and Nathan Hale High schools offer the Internet in every classroom, Foltos said.

The \$75 million technology levy would have paid for the wiring, equipment, training and support staff needed to provide every classroom in the district with the Internet as well as with phones and cable TV.

The biggest cost item was wiring inside and outside of schools. Whether volunteers will install additional cable TV and phone wires along with computer network wires is one of many details still to be decided.

While most wiring may now be possible without a tax increase, Cowan said a smaller levy may be needed to upgrade electricity and fulfill other technology plans.

The alliance is focusing initially on wiring because of strong volunteer interest, but it also plans to raise money for staff training and development, Kile said.

The sudden rush to wire Seattle schools concerns some of the key players in local technology planning, including City Councilwoman Tina Podlodowski, the UW's Lazowska and King County cable communications manager Martin Blizinski.

All three are involved in a newly approved fiber-sharing plan that will link the city, county, UW, community colleges and federal government in a downtown Seattle fiber network intended to allow cheaper, more direct communication. The school district may join the project later.

"I don't feel the district is necessarily ready yet to go out with something like a Net Day," said Podlodowski, a former Microsoft executive. "I would just want to make sure that the investment the school district makes ties into a broader vision."

For example, she wants to make sure the general public has access to school computers after school hours. She also wants standards for use of computers and software in classrooms.

The alliance shares the concern about coordination and wants the county and colleges to sign off on a volunteer wiring plan before it proceeds, Kile said.

Another hurdle will be developing a wiring plan for each school, so that volunteers know exactly where to wire without risking exposure to asbestos or other hazards.

As long as those plans are prepared carefully, said School Board member Don Nielsen, it makes sense to proceed with internal wiring while waiting for the external wiring project to clear up.

"I don't want to lose that enthusiasm and momentum," he said.

The City Council approved the year agreement with TCI on Dec. 1.

Besides calling for adding channels and other improvements to cable service, the franchise agreement honors the school district's request for help with Internet access.

TCI will replace coaxial cables with higher-capacity fiber along the city's major thoroughfares. The combination of new fiber and old coaxial cable will make it possible for customers throughout the city, including schools, to hook up to the Internet. The schools just need to install modems and extend their existing cable television wires to more classrooms, said TCI's Bennett.

Seattle will be one of the first in the country to test the new cable system. And both Foltos and Lampe, the city administrator who negotiated the TCI agreement, pressed some uncertainty about whether the new technology can meet school Internet needs.

"My guess is it probably will be the best solution for a high school. They're probably going to want more capacity," Lampe said.

But Bennett and the UW's Lazowska said the technology has been proven successful. So far it has been tested in the Bay Area and two other areas.