

Whately Notebook

Whately water judged high quality

WHATELY — Although many residents living in the center of town may not know it, the water they drink every day is exceptional. A quart of water from the Whately Water District, which serves 42 homes in the center of Whately, won second prize in a taste test at a state conference held by the Massachusetts Rural Water Association.

Nicholas Jones, the district's water commissioner and superintendent, filled the quart from his own sink on Chestnut Plain Road.

"Our water is clean and tastes good. It's drawn from two bedrock wells, and 95 percent of the time we don't have to treat it with chemicals," Jones said. "Everyone in the district is happy because the water tastes good, but it's nice to have independent confirmation."

The Whately Water District is a private, nonprofit organization that is collectively operated by the residents it serves. Jones said the center of Whately has historically had a short supply of water and private wells in the area often

UMass scientists get grant to test new Internet networks

■ Ceruzzi

From Page C1

ed within a 100-foot buffer zone protecting a "resource area" that could include a wetland or a stream.

Norman said opponents have "serious concerns" about Ceruzzi's plans for a storm water infiltration system, which will consist of perforated pipe and rock bedding and will be used to treat storm water run-off for the parking lot located on the east and south ends of the building. He said the plan should be redesigned to eliminate the underground infiltration system because of a high potential for pollution from the parking lot.

Ceruzzi plans to build on 17 acres of Mackin-owned property, a former gravel pit. It has not yet been revealed which retailer plans to build there, although Norman has said he thinks it will be a Wal-Mart.

Meeting set for Tuesday

The Conservation Commission will review the changes Tuesday at 7 p.m. at the police station on High Street.

The next step in the town process is for Ceruzzi to go before the Planning Board, but it is not yet clear when that

AMHERST — As modern life increasingly relies on networks of small, specialized computers and sensors to operate trains and bus systems or monitor weather, for example, testing their performance and reliability becomes more important.

A group of University of Massachusetts computer scientists recently joined with 61 other teams nationwide to participate in building and deploying a virtual laboratory funded by the National Science Foundation for experimenting with future Internet architectures, or networks.

Computer scientists David Irwin, Prashant Shenoy and Michael Zink were awarded a \$535,000 National Science Foundation grant to continue work on a project known as the Global Environment for Network Innovation (GENI), managed by BBN Technologies of Boston, who received \$10.5 million from NSF.

Within a few weeks, academic/industry teams will conduct Internet-based experiments in an important first test of the network at a GENI conference, according to Irwin. "By building a shared facility that spans more than 60 other research networks across the country, GENI makes it possible for us to study how to build faster, more secure and more reliable Internets than today's familiar Internet," says Irwin.

One of the GENI teams at UMass is called ViSE, for Virtualized Sensing Environment, which includes a movable camera and steer-

able weather radars on campus. ViSE will be integrated with, and shares a mission to "revolutionize the way we

■ This network (of computers) will allow researchers to experiment with using sensors ... to improve systems for predicting and detecting dangerous weather such as tornadoes.

observe, understand, and predict hazardous weather" with the other sensor network on campus, known as CASA, for Collaborative Adaptive Sensing of the Atmosphere. Together they'll deploy computers at many locations in the Amherst area,

including on mountaintop fire towers and buildings on campus. These computers will connect to both short-range weather radars and an array of other sensors, and communicate wirelessly using long

distance antennas.

This network, known as a testbed, will allow researchers to experiment with using sensors such as weather radars, to improve systems for predicting and detecting dangerous weather such as tornadoes. An immediate goal is to connect these sensing systems with emerging cloud computing platforms offered by companies such as Amazon.

"New innovation in sensing systems goes hand-in-hand with new innovation in the Internet and cloud computing, since sensors must send their data over the Internet to the computers that ultimately process the data to accurately predict when and where hazardous weather exists," Irwin explained.

He said the goal is not to develop new specialized detection techniques, but to develop an open, accessible, shared public facility that other researchers can use to test out their own ideas

and Blandford elementary schools, and educate all district schoolchildren in the Chester and Littleville schools.

Three committee members — Sue

Elementary School in Huntington, which currently has 185 students. The 57 Blandford students will attend Chester Elementary, which has 60 students.

"I think it was a vote necessary to sup-

school... she told her... she wouldn't bear... Up until now, daughter from... trying to shield her... discussions... to tell my 5-year-old... of that loan

A scientist's playground

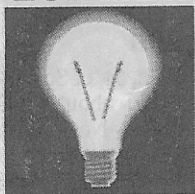
ashant Shenoy, a University of Massachusetts computer scientist, has built himself a playground, but it's not the kind to which you'd bring a child.

Instead of swing sets and slides, Shenoy has low-powered radars on wheels and pivoting video cameras that create a virtual wonderland for scientists to experiment with cutting edge computer technology.

Technically, Shenoy's creation is a "testbed," a place where researchers can conduct experiments without affecting established infrastructure like the Internet.

"A testbed is like a playground where you try things out before you can actually put it out in the real world," Shenoy said. "You've got to try things out before you give them away."

EUREKA!



A REPORT ON RESEARCH DISCOVERIES AT AREA COLLEGES

By Kristin Palpini

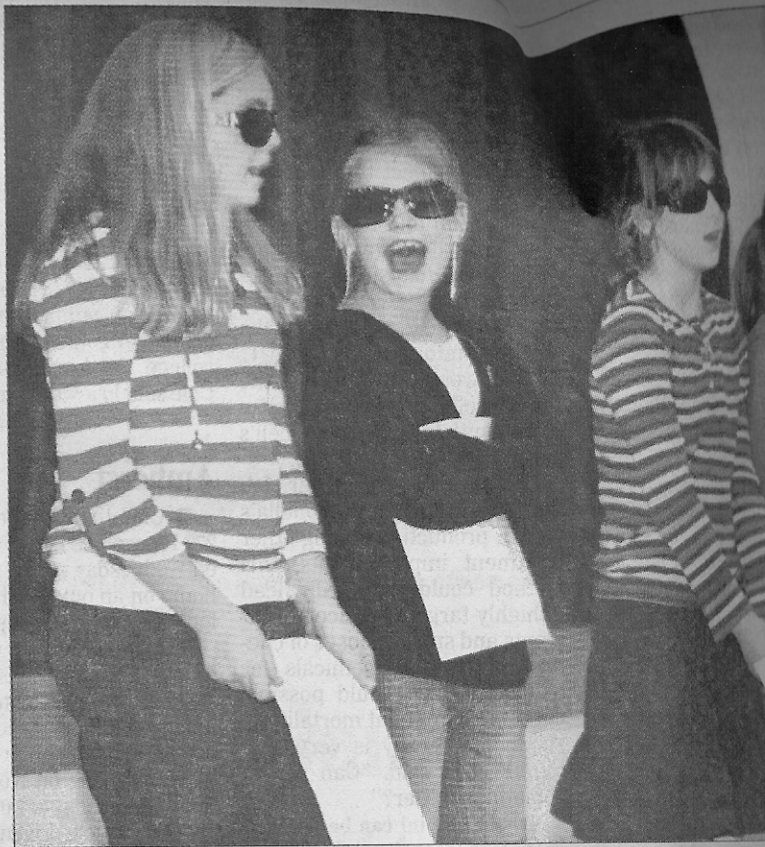
Shenoy's testbed is one of 61 testbeds across the nation constructed to let scientists play out their wildest, hypothetically feasible, heavily researched, fact-based fantasies.

The project is known as the Global Environment for Network Innovation (GENI) and is funded by the National Science Foundation.

GENI's goal is to foster a virtual lab where scientists can conduct experiments that will lead to new communication and Internet technologies.

This "makes it possible for us to study how to build faster, more secure, and more reliable Internets than today's familiar Internet," said David E. Irwin, a UMass computer scientists who worked alongside Shenoy and UMass computer scientist Michael

■ See EUREKA / Page B2



R.K. Finn Ryan Road School students Alesandra Campedelli, Sa Danielle Parent, Zane Wendolowski and Ray Higgins rap the song "of the Martin Luther King Jr. birthday celebration at R.K. Finn Ryan birthday is today.

Schoolchildren celebrate

By CATHERINE BAUM
Staff Writer

NORTHAMPTON — R.K. Finn Ryan Road students sang "Happy Birthday," "Cumpleanos Feliz" and "Steen Rogdenia Teebia" Thursday to Martin Luther King Jr., who would have turned 81 today.

It seemed fitting they would sing the traditional song in English, Spanish, Russian and Portuguese, for King advocated fairness for all people everywhere, and at Ryan Road there are students who speak

these languages in their homes.

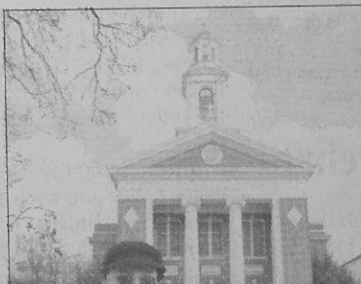
"We really wish that Dr. King was still here with us today so we could sing Happy Birthday to him, but he had a dream and it's still alive in us," said Margaret Riddle, school principal.

Students drew posters, rehearsed poems, developed time lines and speeches, and memorized skits and songs of freedom for weeks in their own classrooms before Thursday's schoolwide celebration. They learned about the civil rights movement during their preparation.

Inside recent Gazette headlines

Answers to the weekly news quiz appear at the end of the feature.

1 Which headline actually appeared in a recent Gazette?



?? GAZETTE NEWS QUIZ

Dog"

(d) Cook a perfect lemon soufflé

5 Tom Williams, chief technical officer at South Deerfield's Millivision Technologies, claims his company's Portal System 350 body scanner is a safe and private way to:

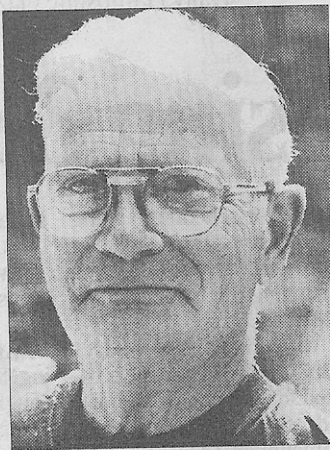
(a) Spot unauthorized items on people's bodies

(b) Scrutinize the exact decorative

Eureka

g Westhampton resident

■ Continued from B1



(Corliss) Scott; two sons, Robert Scott and his wife Kathleen of South Deerfield and Richard Scott and his wife Janet of Pelham; two daughters, Christine Labrie and her husband Roger of Southampton and Susan Morton and her husband Thomas of Westhampton; and two sisters, Thelma Waterman and Eleanor Truehart, both of Easthampton. He had 12 grandchildren of whom he was very proud and was also blessed with six great-grandchildren.

A memorial service will be held on Sunday, Jan. 17, at 3 p.m. at Westhampton Congregational Church. There are no calling hours. Burial will be in the spring at Westhampton Center Cemetery. The Boucher-O'Brien Funeral Home is entrusted with his care. Donations in his memory may be made to the Friends of the Westhampton Memorial Library, 3 South Road,

Zink to create the testbed, or ViSE, Virtualized Sensing Environment.

It is important to improve sensing systems, Irwin explained, because sensors send data over the Internet to the computers that ultimately process data. Better sensors lead to a better Internet and better Internet applications.

ViSE was created to host experiments on wireless sensor networks, a collection of autonomous devices connected to collectively monitor physical or environmental conditions such as temperature or vibrations.

At UMass the network is made up of radar nodes, low-powered radars that run on solar panel fueled turbines. The testbed was designed to help researchers try out new weather sensing technology. Shenoy said he hopes experiments will improve how dangerous weather such as tornadoes are detected and predicted.

ViSE will team up with another UMass research team CASA, Collaborative Adaptive Sensing of the Atmosphere, to connect both short-range weather radars and an array of other sensors to communicate wirelessly using long-distance antennas.

"We hope to eventually power the next generation of the Internet," Shenoy said.

Battling cancer

In the hands of UMass chemical engineer Neil S. Forbes sal-

survival time of mice with primary tumors to 100 per

"It's pretty exciting," Forbes said. "We're not ready for a human trial yet, but that's where we will be going, we hope."

Forbes created and tested this new treatment along with his colleagues Sabha Khan, Pioneer Valley Life Science Institute of Springfield, an oncologist, and Richard D. Gelber, chief of surgical oncology at Baystate Medical Center.

They began by knocking out the gene embedded in the DNA responsible for the tumor, thus making the cells less.

On a plasmid, which is an extra chromosomal DNA molecule usually present in bacteria, Forbes introduced the TRAIL gene into the DNA to genetically engineer the bacteria. TRAIL and an added gene produce a DNA region that facilitates production of an RNA. The RNA DNA sequence.

Salmonella was used in this experiment because of the bacteria's attraction to tumors, a natural property observed by scientists last 10-15 years. One needed salmonella in the tumor, about 48 hours after being injected into the tumor. Scientists subject the tumor to a dose of radiation.

The radiation sets off a chain reaction. It damages the bacteria's DNA (causing a strand break), which allows the promoter to get the bacteria into making TRAIL. TRAIL works by killing cancer cells and making cancer cells amass.