

# NetDay

## Five Years of Connections 1996 – 2001

a special report dedicated to all NetDay volunteers & friends who strive to connect every child to a brighter future through education and technology

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Dear Friends of Education and Technology:

Five years ago on March 9, 2001, a revolution in education technology was born – it was NetDay’s first “electronic barn-raising” event where volunteers spent the day wiring schools in California for the Internet. The goal was simple: to wire all of California’s schools so that students could access the World Wide Web as part of their education. Over 50,000 volunteers, including elected officials, business leaders, educators, union workers, and community organizers, spent the day side by side wiring schools, classrooms, and libraries to the Internet. Volunteers brought donuts, home workshop tools, donated cabling and an undaunted spirit to their neighborhood schools. Their accomplishments were remarkable – a quarter of the schools in the state were wired in just one day.

At the center of this education revolution was partnership: schools and communities, parents and teachers, business leaders and school leaders investing time, energy, and expertise to provide children with greater access to education opportunities through technology. The NetDay volunteers shared a common belief that the Internet provided opportunities to enhance education for all children, regardless of race, gender, cultural heritage or economic status.

The challenges in 1996 were different than those that our schools face today. Back then, only 14% of our nation’s schools were connected to the Internet, and the costs of bridging that connectivity gap – in terms of time, energy, and expertise – were insurmountable for most schools. Over the past five years, we have made significant improvements - today, over 95% of our nation’s schools have access to the Internet, and 63% of classrooms are wired. These dramatic improvements, resulting from community partnerships, state and federal governmental investment, and nonprofit organization involvement, reflect our nation’s commitment to technology as a means of improving education.

Today, NetDay is still driven by a mission to connect every child to a brighter future, whether it’s by supporting school wiring days, providing concrete guidance on technology planning and integration, or developing professional development programs to help teachers embrace technology. Our “real legacy” is best told by individuals who shared this vision and made “NetDay” happen in communities all across America. The stories that we have collected for this report are stories of determination and resourcefulness that show that the real power of change occurs when people with a common goal work together. In the case of NetDay, this teamwork reflects a commitment to improving education opportunities for our children.

In this report, *Five Years of Connections*, we have collected stories from the parents, teachers, business owners and state organizers who were involved in NetDay efforts to show the depth and breadth of their commitment to education. This report highlights different models of school-community involvement that are relevant today as schools face the evolving challenges of meaningfully integrating technology into instruction. As we celebrate the fifth anniversary of the first NetDay wiring event, we are proud to dedicate this collection of stories to all of the volunteers who have made and continue to make a difference for children and their futures.

Sincerely yours,

Julie Evans  
Chief Executive Officer  
NetDay



## **Reflections on NetDay: Five Years of Connections**

*By John Gage, Chief Researcher and Director of Science Office,  
Sun Microsystems and Co-founder of NetDay*

Walk into almost any school today and you will see students researching topics for school projects on the World Wide Web; teachers turning to their networked computers to illustrate a lesson point; education and learning buzzing all around in various forms. Today, 95% of all schools and 63% of classrooms have access to the Internet. Classrooms no longer have boundaries. Students with access to the 'Net participate in real world activities, and teachers collaborate and share thoughts and teaching materials.

On March 9, 1996, when NetDay was launched, our goal was simple: to wire all the schools in California to the Internet. On a single day, 100,000 Californians responded to their schools' requests for help. This call to action changed the future for 5,000 California schools and started a global movement that has impacted nearly every state and many countries. Parents, who worked in the technology industry lent their expertise, helping with technology planning and installation at their children's schools. Corporate sponsors paid for wiring kits, offered free Internet access, email accounts and software, and donated hardware components. The government contributed surplus computers to individual schools, and union workers donated time and expertise on cable wiring.

On this one Saturday five years ago, more than five times the number of volunteers who registered at [www.netday.org](http://www.netday.org) showed up at their local schools to work. One elementary school had 200 volunteers who came not only to work, but to also talk about what direction the school should take with technology integration. This renewal of community involvement centered on the primary institution for preparing our children for the future: our schools. NetDay brought parents back into the schools to experience life in the classroom again. Through the NetDay wiring events, communities were energized to pitch-in on the effort to link schools to schools, and communities to schools.

Over the past five years, NetDay has helped thousands of schools gain access to the Internet. Our innovative approach to public-private partnerships has assisted schools in acquiring modern technology in a cost-effective manner, making it possible for all students to benefit from technology as part of their education. NetDay continues to help schools realize the real promise of technology within education by linking people together, connecting communities to schools, parents to teachers and business leaders to principals to support education for all children. We are proud of our legacy of connections and look forward to a future that is bright for all children.

## Introduction

The roots of the NetDay legacy are deep within education and community involvement. The lessons learned and models developed as a result of NetDay efforts nationwide can be used today as schools and community tackle new challenges around education and technology. From the stories that we collected for this report, *Five Years of Connections*, several common threads have emerged that are significant to keep in mind as schools and communities work toward their new goals.

- **Education** for all children is the cornerstone for all efforts and it is important to always think about technology solutions in respect to the educational opportunities they can provide.
- **Leadership** is an essential element for providing visionary goals as well as implementation guidance for all projects involving education and technology.
- **Public-private partnerships** are an often-untapped resource for schools and communities to leverage for greater success.
- **Volunteers** provide the spirit to get amazing things accomplished within our schools and communities and projects should involve people from every community sector with a wide range of skills and talents.
- **Technology** is always evolving and so, the work of providing enhanced educational opportunities for all children through technology is never really completed or finished.

The following case studies capture the camaraderie and spirit of NetDay events over the past 5 years, in the both U.S. and abroad. They offer a thumbnail sketch of the types of community-driven activities that have wired thousands of classrooms to the Internet and provided opportunities for students to have enriched educational opportunities through technology access. These stories of connections are meant to provide you, our reader, with new insights into the many ways that communities can continue to work together to connect every child to a brighter future through education and technology.

# NetDay Stories: Making Connections for Children

## California: Ground Zero

Modeled on the success of communities united in purpose throughout American history, California's NetDay was the first attempt in the country to bring wiring infrastructure for networks to a large number of schools. Volunteers around the state pitched in to make it happen: unions waived their rules; companies provided planning, tools, materials, and training; and teachers, other school employees, and parents turned out to help pull cable wiring and provided input on technology planning and development.

The NetDay web site served as the organizing tool for California's wiring initiative. Volunteers registered online for the school of their choice by clicking on a map or conducting a search to find a local school. The site included ordering information for discounted wiring kits and other special offers from companies. Each local organizer was responsible for planning, soliciting donations, and training volunteers. Businesses donated cabling materials, network equipment, and computer hardware and software as well as tools, ladders, food, t-shirts, and other items for the events. Parents and students raised funds to purchase what could not be donated, as well as their time and talents. Educators and school employees planned events, prepared the school, organized resources, and pitched in on NetDay.

### **A Regional Effort with Big Results**

#### **Smart Valley**

Karen R. Greenwood  
Project Director, Smart Valley  
President, Nimble Press

**[www.svi.org/netday](http://www.svi.org/netday)**

Schools in the Silicon Valley region of California were organized through the efforts of Smart Valley, a collaborative non-profit organization formed to create an electronic community by developing an advanced information infrastructure and the collective ability to use it. The nonprofit's team of 13 people brought together 14,500 volunteers and 125 companies to wire 350 schools over three NetDays.

Smart Valley emphasized technology planning and training for school districts to implement a sustainable network infrastructure. Participating districts signed a Memorandum of Understanding agreeing to pull wire to at least 75% of



classrooms in exchange for volunteer and equipment support. Smart Valley created a series of planning workshops for district project managers with community volunteers to develop and review district technology plans. With just three months to prepare for the first event, 100 schools had the technology plans and training to make the first NetDay an unparalleled success.

*One week before NetDay, we held a practice NetDay at a local school where team leaders participated to experience it first hand. They learned how to facilitate and improve their own NetDays. District leaders told me later that the most valuable thing for them was assistance with planning and training.*

*Karen R. Greenwood*

Smart Valley gave companies an organized, credible way to support local schools of their choice in a project with real, verifiable results. Their contributions of time, resources, donations, and equipment discounts came to an estimated \$27 million in cost savings for local schools. As a result of their experiences with NetDay, many companies formalized their relationships with schools, initiated education discounts, and made education a priority in their philanthropy programs. Several individuals found the experience so satisfying that they left their jobs to consult with schools.

One of the ways Smart Valley persuaded schools of the value of networking was by using the Internet to organize the events. Without networks, email, web sites, and databases, the scale and scope of the Silicon Valley NetDay would have been impossible. The Internet enabled a small staff to organize thousands of volunteers to support over 100 sites per event. Smart Valley developed web pages linked to school and volunteer databases to generate the latest information on demand. Email lists for volunteers, company leaders, and district project managers received regular email updates about discounts, activities, and needs.

*With the first NetDay we had a very difficult time reaching schools. They didn't have email, few had fax machines, and they only answered their phone during school hours. By the last NetDay, the schools all had email contacts and entered their event information and checked for volunteers directly on our web site.*

*Karen R. Greenwood*

## **NetDay in Gold Rush Country**

### **Nevada County Schools**

Terry McAteer  
Superintendent, Nevada County Schools  
[www.nevco.k12.ca.us](http://www.nevco.k12.ca.us)

Far from the high-tech cities and suburbs of the Valley, in the Sierra Mountains, the Nevada County School District focused their wiring efforts on two middle schools (built in the 1860's, they are two of the oldest schools in the state). They learned about NetDay through the national media coverage and had parents calling to find out what they could do at their school.

As in many rural communities, the schools are the community centers where parents hold potlucks, community meetings, and now have access to computer labs. By pooling resources and calling on volunteers from local companies—National Semiconductor, TDK, 3Com, and Grass Valley Group—the school district networked Chicago Park, a K-8 school with 128 students, and Clear Creek School, a K-8 with 107 students.

Volunteers spent one day wiring both schools: classrooms, libraries, and administration offices. Approximately 8-10 people worked at each site for 8 hours. Today, these two schools are as technologically advanced as any in the state with small labs of 6-12 computers, and classroom computers. Through partnerships with companies, both schools received new sets of used computers eliminating their technology deficit and positioning them as leaders.

*Networking the students from little rural schools creates a huge esteem change. These students have great pride in their 4H programs, in their community, and now they are part of the 21<sup>st</sup> Century. Their test scores rank in the top of the state; they know they can compete with students in other areas.*

*Terry McAteer*

## **Massachusetts: A Continuing Partnership**

In Massachusetts, educators, business leaders, and government leaders collaborated to form a non-profit organization to bring the NetDay vision to schools throughout the state. By spring 1998, more than 20,000 volunteers had donated their time and expertise to help wire 900 schools, half of all public schools and two-thirds of school districts. Through volunteers, donations and discounts, Massachusetts's schools saved an estimated \$35 million.

### **A Virtual Space for Real-time Collaboration**

#### **Mass Networks Education Partnership, Inc.**

Steve Miller  
Executive Director  
Mass Networks Education Partnership, Inc.

**[www.massnetworks.org](http://www.massnetworks.org)**

The news about NetDay in California reached Massachusetts in an email, which directed volunteers to the NetDay web site. Steve Miller received the message, followed the link, and saw how Massachusetts could leverage the NetDay idea to organize a comprehensive, state-wide networking initiative. He founded the Mass Networks Education Partnership, with support from the Massachusetts Software Counsel, the Massachusetts Technology Park Corporation, and Senator Edward Kennedy.

*You had to be supportive of technology pioneers in education. When you spent time with them, face to face, you could help people think about long-term issues with both technology and professional development. By working with these pioneers, local schools and teachers could own the whole thing.*

*Steve Miller*

The success of NetDay in Massachusetts gave legitimacy and impetus to MassNetworks, a non-profit organization of people from education, business, government, and labor working together to promote the use of information and communication technology as a tool for education reform. The organization supports these goals:

1. Encourage as many schools as possible to start a LAN wiring project.
2. Foment professional development for teachers.
3. Improve community and business school connections.

Once they accomplished the first goal, they shifted resources to support professional development, and leadership. Steve Miller: *"We're moving from technology infrastructure to learning environments. We're trying to create Virtual Education Space, a state-wide environment to support teaching and learning."*



## **A Community Network for a Local School**

### **Thomas Edison Middle School, Boston Public School System**

Carolyn Costello  
Computer Teacher  
Thomas Edison Middle School

Carolyn Costello describes herself as “Miss NetDay” for Thomas Edison Middle School in Boston. She worked with a team of people from the Boston Public Schools (BPS) Offices of Instructional Technology, Information Systems, Planning and Engineering, and Boston City Hall. Together, they coordinated the wiring design for eight classrooms, a computer lab, the library, and offices at Edison. She remembers the experience as a great opportunity to involve the community with the school.

*One of the best parts of NetDay was having people of totally different backgrounds such as teachers, construction workers, and parents with high tech experience, coming to the schools and working together. Boston’s IBEW Local 102 put a call out for volunteer electricians. Our school had 12 electricians who pulled 80 wires, labeled, and punched down five classrooms. The parents were excited and thrilled about their involvement in the project, configuring machines and helping with food.*

*Carolyn Costello*

NetDay turned into NetYear when Mayor Thomas M. Menino pledged to connect every classroom in the city to the Internet. The capital improvement plan for all 136 schools began in 1998 with the commitment of BPS’s Superintendent Thomas W. Payzant, OIT Director Ann M. Grady, OIS Director Albert Lau, and the mayor’s advisor on technology and education, Steven Gag. By the end of 2000, 72 schools had a complete technology infrastructure with power and data.

Teacher training in BPS began as each school received its starter network. Teachers who have attained Novice Level are eligible to be coached by a master teacher. Together, they design curriculum using different applications to integrate technology into content areas aligned with state standards. These teachers then receive a computer and printer for their classroom.

## **North Carolina: Planning + People = Partnership**

North Carolina NetDay began in October 1996 and wiring continued through October 1998 under the non-profit ExplorNet's leadership and state government support. About 25,000 volunteers networked 25,500 classrooms (one-third of total) across North Carolina, saving taxpayers approximately \$47 million.

### **A Continuing Project**

#### **ExplorNet**

David Boliek  
President, ExplorNet

**[www.explor.net](http://www.explor.net)**

Back when people subscribed to email lists to find out about new web sites, a television news reporter in North Carolina received an email about [www.netday.org](http://www.netday.org). David Boliek followed the link to learn about the California NetDay in spring 1996, and was so inspired that he began a campaign with photographer Victoria Deaton, to bring the program to their state. They started an advisory committee of educators, state leaders, and business leaders from research Triangle Park and across the state in order to marshal their expertise to organize NetDay.

*We read about NetDay in California and started writing letters. What an incredible idea: marshalling business resources, and volunteer people to get schools up to speed. This was the only way it was going to get done. NetDay was an incredible, original, searing thought that people latched onto and ran with.*

*David Boliek*

The success of the first NetDay in October 1996 got the attention of the legislature. They came to Boliek with an offer: you had no money, no budget, and no staff, what could you accomplish with funding? With state funding and business partnerships, Boliek and Deaton founded ExplorNet, a nonprofit dedicated to equipping all schools with the technology and training necessary to prepare students, teachers, and communities for the 21st Century and its economy.

*They [the advisory committee] saw what I saw as a reporter: in the most remote, poorest parts of North Carolina, teachers were teaching their heart out and the Internet gave them access to information. Through the Internet, kids in Halifax County or Warren County could have access to the same information as Chapel Hill. All of a sudden the playing field got leveled.*

*David Boliek*

ExplorNet continues their work through a program that address the shortage of technology workers with school training programs, the need for teacher training in curriculum integration techniques, and expanding access to networks through computer repair and refurbishment. Their training centers advance the NetDay legacy through a staff development model that enables teachers in urban, rural, and schools in between to share best practices.

## **A Map to Success**

### **North Carolina Department of Public Instruction**

Elsie Brumback  
Retired Director of Educational Technology  
North Carolina Department of Public Instruction

**[www.dpi.state.nc.us](http://www.dpi.state.nc.us)**

For 25 years, Elsie Brumback served as Director of Educational Technology for the North Carolina Department of Public Instruction (she retired in 1999). A recognized leader in education technology, the state counts many “firsts” among its accomplishments:

- the first state to have a statewide technology plan;
- the first state to have a computer skills curriculum K-12;
- the first state to mandate that all students must pass a computer proficiency test prior to graduating from college; and
- the first state to mandate that all educators must include 5 hours of technology training as part of their pre-requisite courses for certificate renewal.

Brumback and Boliek knew each other well, when Dave started his NetDay mission and Elsie recalls: *“I knew that he would proceed with his plan whether we were involved or not...and as he has said repeatedly since that time... ‘Elsie knew that if she didn't want Dave to really screw things up that she had better come to the table and be a key player!’”*

Her office joined the advisory team and began pitching the NetDay idea to school leaders. To overcome resistance, Brumback carried a map of the state with her to meetings with each district color-coded: green for wired or a funded plan to wire, yellow for districts with coordinators in place and fully involved in the NetDay planning process, and red for districts that had indicated that they did not intend to participate. Due to pressure from legislators, the general public and others, red disappeared from the map.

*It was exciting for our Advisory Board to roll up our sleeves and pull wire with local folks in our "pilot" schools prior to the big day so that we could work out the bugs. My regional staff members served as regional coordinators for the project and facilitated any questions or problems that arose in their region. Dave enlisted*

*the help of the National Guard to use helicopters to cover the state with supplies needed at the last minute. Several local companies used their retired employees (called Pioneers) all across the state to share their technical expertise in remote areas where it was needed. The news media co-operated with coverage throughout the day as well as a grand finale at the state capitol at the end of the day where numerous district staff members were featured over the news wires to tell of their successes during the day...Everyone took pride in the great success that NetDay had offered to the schools of North Carolina.*

*Elsie Brumback*

### **Mississippi: Small Towns with Big Shoulders**

In Mississippi, the State Department of Education took on the role of project champion with volunteer support from the BellSouth Foundation Pioneers and local support from grass roots organizations. Approximately one quarter of the state's schools (875) participated in NetDay wiring events between fall 1996 and spring 2000. Today, 50% of classrooms have Internet access and 85% of schools have high-speed access to the Internet.

#### **Facilitating Local Success**

##### **Mississippi Department of Education**

Zucchini Dean

State NetDay Coordinator

Mississippi Department of Education

**[www.mde.k12.ms.us](http://www.mde.k12.ms.us)**

In Mississippi, corporations like BellSouth and Anixter brought the idea of NetDay to the state, and, with encouragement from leaders of the NetDay organization in California, the State Department of Education organized the effort. They wanted NetDay activities in Mississippi to remain a grassroots effort where school districts, local businesses, and parents took ownership. The department facilitated the program by recruiting volunteers, developing partnerships with companies, and creating buy-in from school districts.

As a state of primarily rural communities, civic pride meant that schools had plenty of volunteers, but low school funding meant the schools had few resources to purchase supplies for volunteers to use during NetDay. The problem was solved when Belden-Wire & Cable Co. of Richmond, Indiana donated 342,000 feet of cable through the NetDay organization.

*They brought the wire down in a truck from Indiana in thousand foot rolls, and we stockpiled them in Dr. Helen Soule's [Mississippi Director of Educational Technology, Training and Support] husband's warehouse. Our NetDay efforts started with schools in empowerment and enterprise zones. We delivered cable based on free and reduced lunch levels, accreditation level, and on student achievement, so that cable went to lowest performing schools first.*

*Zucchini Dean*

Over the years, the focus of Mississippi NetDay leaders has shifted from technology installation to the promotion of a whole learning approach to increase student achievement, and help teachers become competent in using technology as a tool in the curriculum. The Governor of Mississippi has supported a classroom technology initiative to place at least one Internet-capable machine in each classroom. The grass roots NetDay events continue, according to Dean with occasional volunteer wiring events.

## **Leadership Lends a Hand**

### **Carthage, Mississippi in Leake County**

Gary Rawson,  
Volunteer Parent to Schools  
Infrastructure Planning Coordinator  
Mississippi Department of Information Technology Services

As part of an economic development program called Leadership Leake County, volunteers in this rural Mississippi county came up with projects to improve the community and Gary Rawson's team chose NetDay. The county has seven public schools run by a district office located in the county seat of Carthage, population 12,000 and one private school. The model of volunteers pitching in to accomplish a task is not new to this community.

*It was easy to get the community excited because the structure already exists. We put up a banner in front of the meeting building to make people aware. I knew whom to call to do things: cook hamburgers, bring supplies, provide labor, etc. everyone pitched in and worked toward a common goal. All the volunteers walked in and asked, "What can I do?" The biggest challenge was putting the people in jobs that used their talents.*

*Gary Rawson*

Rawson estimates that the district saved \$200,000 through community involvement, donations and support. For the NetDay project, the group raised \$12,000 to satisfy a budget of \$10,000, and only spent \$7,000 to complete the task. The remaining funds were used to upgrade the school's PCs to utilize the network. Even the students pitched in, donating extra cash in jars set up at the local schools. The community combined all of the donations for both public and private schools to satisfy the needs of the whole community.

Today, the network extends to all classrooms and students have exposure to the Internet, word processing, and networking. Rawson and his team have been recognized by the state as one of the top 10 leadership projects for NetDay.

## **Connecting Drew to the World**

### **Drew School District**

Dennis Silas  
Assistant Superintendent  
Drew School District

**[www2.mde.k12.ms.us/6720](http://www2.mde.k12.ms.us/6720)**

Drew School District has 850 students attending a high school, a middle school, and an elementary school. They come to the schools from a wide geographic area including Drew, population 2,000; Rome, population 450, and the children of employees at Parchman Mississippi Department of Corrections. All of the students receive free or reduced lunch and fewer than 10% of students have home Internet access.

Assistant Superintendent Dennis Silas learned about NetDay when he received a letter from the Mississippi Department of Education about training at Ole Miss. He brought a team—a principal, a teacher, and a couple of parents to the training—where they learned to punch down and pull wires. In the car, on the way home, the team thought it couldn't be done in Drew because they lacked expertise, but they decided to try. The community came together: the local hardware store donated supplies and ladders, BellSouth provided volunteers, a local grocery store donated food, and the volunteers pulled more than three drops to every classroom.

The connections made possible through NetDay enable Drew High School to communicate with larger schools in nearby Harrison County. Through distance learning over the Internet, students can enroll in classes such as advanced calculus, physics, and foreign language courses. Without such a network, the students at Drew would not have access to the same quality of education as their peers.

*Our best story is that it really happened in a town like Drew. Living in Drew, Mississippi is almost like living in a Third World Country compared to major cities when it comes to the availability of technology. We actually did NetDay activities and the schools got wired. The wiring was a major accomplishment. We had almost no expertise in the community, and it still worked.*

*Dennis Silas*

## **Utah: Finishing Touches**

When the Utah State Office of Education learned about NetDay, they saw it as a way to leverage existing resources and push wiring projects to completion. The state has 800 public K-12 schools and a legislative commitment to fund technology for schools.

### **Anytime, Anywhere Learning**

#### **Utah State Office of Education**

Dr. Vicky Dahn  
Coordinator of Instructional Technology  
Utah State Office of Education

**[www.usoe.k12.ut.us](http://www.usoe.k12.ut.us)**

*When NetDay was launched, we already had an initiative to connect all schools to the Internet. We looked at where we were and where we wanted to be and what we were missing to accomplish it. We used the NetDay contacts to assist districts to get better funding for internal wiring and community organizations willing to assist them. We also provided opportunities for mentoring kids interested in IT fields. We had a matching service between interested students and volunteers in the state.*

*Dr. Vicky Dahn*

The State Department of Education encouraged each school to implement their technology plans through NetDay. They provided schools with discounted resources, and information about community organizations willing to assist with wiring. The National Guard provided the largest number of volunteers. The department also started a matching service between to connect students interested in IT fields with volunteer mentors.

Today, each classroom is wired and has at least one computer. The current priority is moving the technology to where the learning takes place, from lab environments into classrooms. Educators and officials in Utah also are exploring innovative uses for bandwidth such as video on demand, and blending voice, data, and video over IP networks. Governor Michael Leavitt was influential in launching the Utah Electronic High School, Electronic Community College, and Western Governors University. The K-12 schools collaborate with higher education and libraries to provide services and purchase instructional materials to give patrons and students education anytime, anyplace.



## **Creative Solutions to Tight Spaces**

### **Carbon County School District**

The cat's name was "Tater" and he was employed by the Carbon County School District. To avoid the high cost of pulling cable through tight crawl spaces in the ceiling, this school district opted for a feline fix. They attached monofilament fishing line (12 lb. test recommended) to Tater's collar, and placed him in the far corner of a suspended tile ceiling. The "trainer" would call from the remote side of building. (Here Kitty, Kitty, most effective, or in times of stress Get over here you stupid cat!) The cat would weave his way through the ceiling to the other side and receive a reward. The supervisor detached the monofilament fishing line from Tater and connected it to a Cat 5 network cable enabling the assistant supervisor to pull cable back through the ceiling.

*We are creative and get the job done cheap. We solicit volunteers from all species.*

*Dr. Vicky Dahn*

## **Maryland: Interstate Collaboration**

Maryland joined forces with the District of Columbia and Virginia to form NetDay East. They supported schools in mobilizing community resources (business and citizens) to help the schools get "wired." The project has evolved into a Tech Corps Maryland chapter to link volunteers with certain skills and interests to schools that need one-time or ongoing help related to those skills and interests.

## **The Webslingers' Story**

### **Baltimore City**

Peggy Rice

Bell Atlantic

In 1996, Maryland schools held several "Net Weekend" events to encourage volunteers to wire schools for Internet access, but the turnout and results were mixed. When the next event approached, a Booker T. Washington Middle School teacher decided to find a group of to support her school and called an acquaintance at Bell Atlantic for help.

Peggy Rice of Bell Atlantic learned that many Baltimore City schools had been left behind and needed assistance. She enlisted the support of Pam Pitt, a co-worker and President of Bell Atlantic's Association of Telecommunications Managers and Associates (ATMA). Together they formed the core of a team:



Peggy surveyed the schools, arranged for the materials, and lined up the volunteer training; Pam canvassed the ATMA for volunteers.

They wired Booker T. Washington School on weekends and evenings, and promised to do another, George K. Kelson Elementary School (Peggy's grandson's school). As requests for assistance from other schools filtered in, the team began to refer to themselves as "the Webslingers" and made an ambitious commitment: to wire every public school in Baltimore City.

Bell Atlantic committed the services of technicians to the team and Baltimore City YouthWorks, a summer jobs program, provided extra hands with student support teams. The team completed their work on August 23, 1997 at Malcolm X Elementary School.

## **Texas: No Shortage of Volunteers**

When NetDay came to Texas, different regions used the opportunity to meet their local goals. Some districts opted to wire every classroom in a school, others put the priority on getting a connection to every building.

### **Higher Ed Offers a Helping Hand in Houston**

#### **Houston Independent School District**

Anne Meyn  
NetDay Coordinator  
Houston Independent School District

**<http://txnetresults.cc.utexas.edu>**

*NetDay spawned continuing relationships with companies and individuals who were involved with the project. Many individuals had not set foot in a classroom since their graduation. They might have gone to a PTA meeting, but hadn't paid attention to what was happening in the classroom.*

*Anne Meyn*

During the first Texas NetDay, approximately 80 schools in the Houston Independent School District participated. They installed 6 network connections per classroom to connect to the library and to online resources. The district also trained teachers to share experiences and ideas for enhancing the curriculum and to promote educational technology. Mayor Lee Brown's office provided a team to pull wire each NetDay. The Enhanced Enterprise Community Board gathered local support, and Houston businesses and corporations backed the program. Texas Southern University provided computer training for teachers on

NetDay, and the University of Houston basketball team adopted a low-income school with professional basketball star Clyde Drexler's mother's restaurant donating food for the event.

A NetDay partner in Texas, the Texas Chapter of Tech Corps played an important role in organizing volunteers to provide planning, wiring, and training. They funded training sessions and assisted schools and districts with a long-range plan for technology. The schools identified educational goals and resources, completed an inventory of existing infrastructure, designed a network structure (with volunteers from business), enlisted sponsors and gathered volunteers. In Dallas a group from the telecom industry adopted two schools, one in Dallas ISD, and one in the Wilmer-Hutchins District. Volunteers planned with school teams, wired both schools, procured computers, trained teachers, and maintain an on-going relationship assisting with technology needs.

*People continued their involvement with training, repair work, and made an ongoing commitment to schools. Our schools wanted to be in the 21<sup>st</sup> century and the NetDay volunteers made that happen.*

*Anne Meyn*

## **Getting Connected Faster, Better**

### **Alamo Heights Independent School District**

Rick Martinez  
Director of Technology  
Alamo Heights Independent School District

**[www.ahisd.net](http://www.ahisd.net)**

When Rick Martinez first arrived at the Alamo Heights Independent School District in 1996, he met parents who felt frustrated with the lack of technology in schools. They were concerned that students graduated from high school and went on to college without learning to use technology for learning.

NetDay came to Texas just in time to leverage volunteers, resources, and publicity to quickly connect classrooms and schools. Volunteers answered the call to help pull wire from all over San Antonio; mothers, fathers, and students got involved. Lucent, Graybar, and Fisk Electric supported the efforts with donations and discounts on equipment and services. The District ran 179,000 feet of Cat 5 and 3,000 feet of fiber to classrooms, libraries, and offices in all five schools for \$179,000. Before NetDay, the district received quotes for wiring the schools ranging from \$300,000 to \$400,000.

*We had a crew of 5-6 people to prep the school. We put up j-hooks, Panduit, and pull strings. Companies donated ladders and lights to assist us. Our first school had 150-200 volunteers; they heard about it from articles in the newspaper and*

*notices sent home with students. In one picture, you can see 75 people handing down wire to put it in place under a school. We hired a contractor to terminate and certify the wire and cable for 15 years.*

*Rick Martinez*

As Martinez plans expansion to a broadband network enabling video on demand and other new technology learning tools, he notes that students have already begun to benefit from the changes. They are better prepared for the future. From elementary school on, they research on the Internet, use appropriate applications for a given task such as a spreadsheet for crunching numbers, create multimedia animations, and many other activities. Students who were reading at lower levels and not writing, go online and write contributions to a web board. Not only are they reading and writing, but also they are developing critical thinking skills by critiquing the work of others.

### **Minnesota: Live From St. Paul...**

Minnesota started NetDay with one event at just one school in the fall of 1996. The success of Poplar Bridge Elementary led to the creation of a non-profit organization, a foundation, and an interactive television show. The activities focused first on wiring schools and have since shifted to raising awareness about education technology.

### **A Program for Change**

#### **America's Kids Connect Education Foundation**

Chris Bates

President/CEO

America's Kids Connect Education Foundation

**[www.amkids.org](http://www.amkids.org)**

Ian Griffen, a parent and Sun Microsystems employee, learned about NetDay and decided to organize an effort for his child's school, Poplar Bridge Elementary in Bloomington. He sent an email to parents, inviting them to help wire the school and they completed the network on a single day with 20 volunteers. Using Poplar Bridge as a model, Ian partnered with businesses involved with education technology and the Minnesota High Technology Association to launch NetDay Minnesota. They hired Chris Bates in 1997 to lead the organization.

*My first year in Minnesota, I hit 81 of the 87 counties and put 30,000 miles on my car. I went into every newspaper and radio station. The message I like to give folks? If we made a difference in one kid's life, all the efforts have been worth it. We are giving them opportunity.*

*Chris Bates*

Bates persuaded more than 600 public schools to join NetDay and wire their schools with volunteers. By 1998, 94% of Minnesota public and private schools had Internet connections to their facilities. They next turned to professional development for teachers in collaboration with USWest, Global Schoolhouse, Star Tribune, Minnesota State Colleges and Universities, and the Minnesota Service Cooperatives.

In 2000, NetDay Minnesota became America's Kids Connect Education Foundation to continue the legacy of NetDay in supporting education technology, and to continue to promote the interactive television show launched in 1997. The annual show engages students, teachers, and community in education and classroom solutions through demonstrations, interviews, and a game show contest giveaway of more than \$1.4 million in hardware and software for schools and professional development for teachers.

## **Linking Students to the World**

### **Poplar Bridge Elementary, Bloomington, Minnesota**

Gail Swor

Principal, Poplar Bridge Elementary

**[www.bloomington.k12.mn.us](http://www.bloomington.k12.mn.us)**

The school district had hired a private firm to provide an estimate on wiring the classrooms of Poplar Bridge Elementary, but the cost of just one network connection per classroom was beyond their budget. When a parent, Ian Griffen, sent an email asking for volunteers to support a NetDay project, about 20 people came forward to support the school. Technology leaders trained parent volunteers to drill, pull wire, and punch down network connections, completing 5 network connections per classroom in just a couple of weekends.

*With NetDay, we built a more complete network, more quickly, and for less money.*

*Gail Swor*

Now that the technology is in place, the school has developed a system to support teachers in developing lesson plans and using the Internet for research. Each school in the district has a Curriculum Technologist (CT) who meets with classroom teachers to give them ideas for how to integrate technology into their curriculum plans. Principal Gail Swor sees her job as cheerleader, encourager, and facilitator. When teachers want web sites, her job is to encourage them by providing resources and support.

*The Internet really brings learning alive for the students, providing great sites that are appropriate for lots of educational topics.*

*Gail Swor*

Swor tells the story of a teacher at her school that received an unusual lizard as a donation for her classroom. The students checked encyclopedias searching for information about how to care for and feed the animal, but could not find anything. Without proper care, they were worried that the animal might die. The teacher encouraged them to broaden their search, using the Internet, and the students found the information they needed. The teacher used the experience to explain to them about different research sources.

### **Florida: NetDay Continues**

Florida NetDay began in October 1996 with a specific, measurable goal: to connect every school in Florida to the Internet (except those buildings to be torn down or retrofitted). The organizers raised over \$9 million and wired approximately 1,500 schools. In Florida, NetDay2000 continues the legacy of community involvement with events for donating and refurbishing computers, training teachers, and showcasing school technology.

### **Communications Experts Bring People Together**

Victoria Zepp  
Florida NetDay Coordinator  
Intermedia Communications

**[www.intermedia.com/company/philanthropy](http://www.intermedia.com/company/philanthropy)**

NetDay came to Florida through the fourth largest data carrier in the country, Intermedia Communications when they discovered the NetDay web site. Looking for a major educational technology initiative, they went to [www.netday.org](http://www.netday.org), clicked on Florida and signed up as the state organizer. They considered wiring schools the beginning.

The group provided communication to reach key players in the project. They created a collateral program; set up a database to monitor schools, sponsors, vendors, and large volunteer groups; and worked with the commissioner of education to send out communiqués to all superintendents and principals. Communication tools to support the project included 800 numbers for information, state-wide conference calls and video satellite panels. They also led efforts raise funds to buy the materials that weren't donated.

*Our first corporate partners were our competitors, since they too had major connectivity resources. Together, we met with our Republican Education Commissioner who immediately saw NetDay as a vehicle to accelerate district technology plans, released “Break the Mold” Funds, and gave the department’s full support. Upon calling our Democratic Governor’s Chief of Staff, we learned they had already passed on participating. I asked him, to let me know how to play this in the press. He said be in my office in 15 minutes. They threw out the red carpet, we did a joint press conference, and launched NetDay-Florida, non-partisan and non-exclusive.*

*Victoria Zepp*

Zepp and her colleagues conducted a road show in each county explaining the program to community leaders and school administrators. At one meeting, they presented NetDay , and the group said, “Thanks for sharing, but what do you know about our schools?” Zepp and her colleagues turned it right back on the schools and said, “You’re right.” They didn’t know about the school’s specific needs, so they sat back and facilitated a meeting between local community members as they structured their NetDay event.

According to Zepp, they “future paced” the access initiative to overcome resistance. The first step is about wiring, equipment, and access, but the real program begins once the technology is in place with training for teachers, opportunities for students, and life-long learning for adults. They also encouraged participants to customize the program, using their own suppliers and building on existing relationships to accomplish the task.

## ***Europe: Central Support for Distributed Events***

When President Bill Clinton, Vice President Al Gore and thousands of volunteers helped to wire a high school in California, the world took notice. Educators, companies, and government officials around the globe launched their own campaigns to network schools and raise awareness about technology tools for learning in the classroom. NetDay exemplified an American spirit of community volunteerism and local support for education. The idea proved to be both compelling and flexible as organizations adapted NetDay to their local culture of community and educational priorities.

### **Netd@ys: A Continental Project**

**<http://www.netdays2000.org/english/html/netdays/mitte.htm>**

The European Commission (EC) launched Netd@ys in 1997 to raise awareness in educational and cultural communities of the potential value of using new online technologies as teaching, learning and discovery resources. Netd@ys Europe is a week-long occurrence each fall encompassing thousands of demonstration projects, activities, open houses, and events all over Europe and beyond. The EC provides funding on a proposal basis to schools and organizations to do NetDay projects with a priority on pedagogical and cultural content rather than on the use of technology. More than 150,000 educational and cultural organizations, in 35 countries, have participated in events. These include schools, youth clubs, museums, cinemas, opera houses and vocational training centers.

### **NetDay France**

#### **Leslie Saul**

Coordinator, NetDay France  
Corporate Business Development, 3Com  
leslie\_saul@3com.com

**[www.netday-france.org](http://www.netday-france.org)**

Many of the companies that supported NetDay efforts in the United States have international offices and encouraged these sites to work with local governments on wiring projects. In France, 3Com, Sun Microsystems, Siemens, and several other companies formed a NetDay association. They donated products, volunteers, and expertise in planning, training, and implementation. Leslie Saul, who had been the Smart Valley Project Director for the first NetDay in the Silicon Valley prior to Karen Greenwood, coordinated the NetDay France effort.

In September 1998, the association organized wiring events at one public and one private elementary school in the medieval village of Parthenay. City maintenance workers dropped the cabling to instructional rooms in advance, and



volunteers were trained onsite to terminate cable and hook up computers. Edith Cresson, the European Commission Education Commissioner, attended the events and saw the volunteers in action. The day culminated with a press conference to answer questions about the model and the need for technology in schools.

*We had about 50 parents volunteer for the first school—a lot of mothers who had never used a computer before. With training, they terminated the cable and hooked up the computers. Then their children showed them how to access the Internet. The mothers asked if they could come back and learn more. The school now opens a computer lab to parents in the evening one night a week.*

*Leslie Saul*

Saul found the attitudes toward civic duty very different in France from the United States. Because of the high taxes they pay to support schools, companies and individuals were not accustomed to donating products and volunteering their time to support education. Schools in turn were suspicious of the companies' motivations. Even the role of the teachers unions differed. In the U.S., the unions supported NetDay efforts, but in France, the teachers unions initially protested NetDay Parthenay to push for equity: either all or none of the schools should be wired. In the end, Saul says it took longer for French government leaders to launch wiring efforts, but once they did, the projects were well thought out and successfully connected all the schools.

*In the early days, we knew that the online resources and software needed to really impact learning did not exist. But no one was going to create online educational software and applications until the schools had online access. We made a conscious decision to install the technological infrastructure in order to encourage the development of the applications. Seven years later, we're right on track. The schools are connected, compelling online content and applications are emerging, and we can now focus on educational outcomes—using these resources intelligently to support teachers and help every child achieve.*

*Leslie Saul*



## ***About NetDay***

NetDay is a national 501(C) 3, non-profit education technology organization headquartered in Irvine, CA. Our mission is to connect every child to a brighter future by helping educators meet educational goals through the effective use of technology. Through our programs and events, NetDay connects people by creating environments where the magic of learning for all participants – students, teachers, administrators, parents and community members – is enhanced with appropriate technology resources.

Using knowledge gained from hands-on work with community initiatives and employing advanced strategies and web initiatives to promote leapfrog strategies for under-served communities, NetDay connects people, knowledge and initiatives to achieve a greater scale of sustainability and success through direct and indirect modeling of best practices in education technology integration. NetDay programs blend traditional and technology-based tactics and methods to help foster technology enriched learning environments and technology savvy school leaders.

NetDay programs in 2001 include:

NetDay National School Wiring Days – bi-annual community events designed to support communities and schools as they build connections for every school and every classroom.

NetDay Digital Divide Initiatives (NetDay Community Initiatives) – community driven projects connecting students and their teachers in under-served communities with the necessary resources to facilitate learning through education technology.

NetDayCompass.org – an online directory providing K-12 school leaders worldwide with an organized library of quality resources to guide effective decision-making for education technology and to develop leadership capacity.

NetDay Leadership Summits – national and state conferences that facilitate a national dialogue on how to best promote, develop and nurture technology leadership in our nation's K-12 schools.

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Karen Greenwood ([greenwood@nimble-press.com](mailto:greenwood@nimble-press.com)) had the pleasure of interviewing NetDay leaders from across the country to write the narratives for this book. Karen is the president of Nimble Press, a consulting and project management firm specializing in innovative technology for education and community projects worldwide. She has written white papers on thin client technology, case studies on successful networking and computing projects, and several of the Smart Valley guides to networking, management, and education.

Shelly Luke ([www.eyesonthefuture.com](http://www.eyesonthefuture.com)) conducted the education interviews for this book. She teaches at several universities and consults with companies on local and national education projects. Shelly is a founding member of Virtual Explorers, a not for profit company to bringing real science to classrooms around the world.

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