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BEST PRACTICES

in School Technology

K-20 Success
Stories and
Case Studies

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BEST PRACTICES in School Technology

Best Practices in School Technology is a publication of eSchool News and is dedicated to providing K-20 educators real-world solutions to school technology challenges.

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Ysleta ISD's Guide to Safe and Smart Searching

How to make the Internet a daily instructional and learning resource!

"Our teachers and students embraced netTrekker d.i. with enthusiasm! Once they discover how easy it is to use and all the valuable resources they can access, they are sold!"

– Hector Montenegro, Superintendent, Ysleta ISD

In today's classroom, every child is using the Internet to learn. The World Wide Web provides a wealth of exciting educational resources that can greatly enhance the curricula and energize teaching and learning.

Ysleta Independent School District is located on the Texas/Mexico border and serves over 46,000 students, 90% of whom are Hispanic. Many would not expect this southwest urban district to be a leader in technology integration, but they are. Head and shoulders above their peers, this district is a stellar example of how to successfully utilize the Internet in the classroom and daily curricula, in a safe and productive manner.

Safety First for Students

Ysleta ISD prides itself on providing a high quality, technology-supported education to its diverse student population and naturally, this environment includes the Internet. But, as district leaders knew, allowing students direct access to the Internet without supervision can equal disaster. Danger lurks in the form of sites with misleading, incorrect or even harmful information, and there are also predators and pornography. In addition, using general search tools often returns thousands of results, most of which are off topic or inappropriate, and the sheer number can overwhelm students. That's why Ysleta chose netTrekker d.i., a search engine specifically designed for education. netTrekker d.i. delivers over 180,000 educator-selected online resources that support the complete K-12 curricula to every child's desktop, so Ysleta

A student's response to netTrekker d.i.,

"This is SO cool!"

students receive safe, targeted and appropriate websites every time they search. When asked why netTrekker d.i. is important to her, a Ysleta teacher commented "I don't have to spend my time watching students so they're not accessing inappropriate sites. I can keep the focus on teaching instead."

A Timesaver for Busy Teachers and School Librarians

Hector Montenegro, the Superintendent of Ysleta, is a proponent of using online resources in the district's core content areas. But, as in many busy districts, Ysleta teachers struggled to find the time to search the Internet for, and maintain, resources that would support each curricular area. The task seemed daunting. This important district initiative was another reason Mr. Montenegro championed the purchase of netTrekker d.i.



Knowing his staff already had full plates, Mr. Montenegro took the initiative to find a solution that was easy to use and would provide access to quality online resources, including lesson plans and learning exercises that aligned with the TEKS and TAKS, for his staff. netTrekker d.i. exceeded his expectations. Not only could his educators access well-vetted resources, but they could also search the extensive netTrekker d.i. database by readability measure to find grade level content at appropriate reading levels for every student. Also, an ELL area in netTrekker d.i. was a perfect fit for Ysleta's 90% Hispanic student population. Bilingual teachers were thrilled to be able to search for Spanish sites and then have students utilize a dictionary hotkey to find the definition or translation for any word on a website. netTrekker d.i. has helped save Ysleta educators' countless hours this past year!

Teachers' comment,
"netTrekker d.i. - Best Resource of 2005!"

Successful Implementation Equals Outstanding Results

With a strong commitment to technology, Hector Montenegro fully backed the training and time needed to successfully implement netTrekker d.i. across his 60 campuses and is now seeing the fruits of his team's labor. During the 2004-05 school year, Ysleta was the number one netTrekker user with over 2.5 million page views, doubling the usage of districts with student populations four times their size! Using netTrekker d.i., the district has enriched its curriculum, strengthened its goal of providing a technology-enriched education and enjoyed increased teacher and student productivity. ^{BP}



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Going Wireless – *Students, staff and administration benefit from wireless networks inside and outside the classroom*

While wireless computing is breaking down the walls of every classroom and giving students access to the world, James Elliott, technology coordinator for Coffeyville Unified School District 445, in Coffeyville, Kan., is just grateful that the technology can break through walls as well.

The school district, with about 2,000 students in its elementary, middle and high schools, first installed wireless fidelity (Wi-Fi) about five years ago and continues to upgrade the networks with the latest wireless advances.

Teachers have developed novel ways to incorporate notebook PCs and Wi-Fi into their daily instruction, which captivates students and gets them excited about learning. In the meantime, school administrators say the technology results in increased productivity, time savings and more efficient ways to run school operations.

Maintenance workers, for example, can change the temperature in each classroom wirelessly from their notebook PCs. Principals can immediately write evaluation reports on their PCs as they observe teachers in classes.

The school district's IT department has built wireless hotspots in all three school campuses and administrative offices, using a mix of compatible wireless equipment from Cisco Systems and Proxim Corporation. Most recently, Elliott has upgraded the administration's offices and is outfitting the district's new elementary school with the 802.11g standard, using Cisco's Linksys line of 802.11g products.

The Coffeyville school district offers teachers mobile computer carts filled with Acer notebook computers that they can use in their classes and offer students easy computer access.

And this past school year, Coffeyville district turned its three-day enrollment process, often a logistical nightmare for parents and staffers, into a well-organized, less-stressful experience by using a wireless network for enrollment. Principals say the technology also allows them to communicate faster with their staff.

For security, Coffeyville has installed a virtual local area network (VLAN) and uses Wired Equivalency Protocol (WEP) security to encrypt the data transferred over the network. Coffeyville also plans to use MAC (Media Access Control) address filtering, which offers another level of authentication.

Windows CE-based PDAs can double as IP-based phones, allowing school administrators and nurses to make or receive




Sonya Cantrell and James Elliott, of Coffeyville (Kansas) USD 445, are wild about wireless.

phone calls when they're away from their desks, he says.

As for purchasing IT products, Coffeyville data management specialist Sonya Cantrell says she's most impressed with CDW•G's customer service, expertise in technology and its low, competitive prices. "They've been so instrumental in everything we've done," Cantrell says. "It's worth sticking with a company like CDW•G that you know will be there and will take care of you whenever you have a problem."

CDW•G senior account manager Angelo Selvaggio says providing top-notch customer service is his primary concern. If he doesn't know the answer to an inquiry, he will conference in CDW•G's in-house experts to provide the answers.

Overall, wireless technology has begun to revolutionize the way teachers teach and is making it more efficient for school administrators and staffers to do their jobs. 



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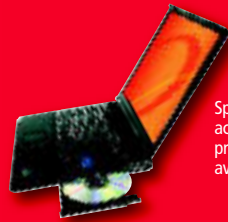
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From Academic Emergency to Continuous Improvement in Two Years

ACTIVboard Collaborative Classroom System a key factor in this school's success

Challenges and Goals

Eagle Heights Academy, a large urban community school in Youngstown, Ohio, was in trouble. Faced with the challenges of meeting heightened performance standards under tighter financial restraints, technology procurement and integration was a constant struggle.

That is, until early in 2003, when Tony Cann, an executive from Promethean, maker of the ACTIVboard Collaborative Classroom System, was in Youngstown on business. A friend of his, Bruce Beard, was involved in sponsoring a charter school, and Cann was interested in getting a first-hand look at the facility. He heard that this family-school-community partnership was making great strides with the daily challenges of teaching predominately “at-risk” students. Cann was eager to share Promethean’s innovative Collaborative Classroom System and explore ways it could further enhance the academic success of Eagle Heights’ students.

It was during this initial meeting that the administrators and teachers at Eagle Heights were introduced to this 21st-century learning environment.

“It was love at first sight,” said Linda Mansfield, master teacher. “I knew instantly that this was the teaching solution of the future—our future—at Eagle Heights.”

Two years later, the school has moved from “Academic Emergency” to “Continuous Improvement.” Its students’ test scores have soared.

Test scores in Math, Reading, Citizenship, Writing, and Science in grades 4 and 6 as reported by Eagle Heights have risen an average of a whopping 26% over the last two years.

For Example:

Grade 4	Math	+/- Change
2003/04	24.8	
2004/05	37	+49%
Grade 6	Reading	+/- Change
2003/04	30.2	
2004/05	55	+82%

Implementation

Initially, everyone at Eagle Heights recognized the importance of integrating the ACTIVboard solution into existing standardized curriculum; however, the administration needed a creative monetary approach to secure it. So the school orchestrated a lease option to purchase seven complete systems.

Today, the school boasts a complete Promethean Collaborative Classroom System for every classroom—45 in all—thanks in part to a substantial technology grant and community donations.

Administrators at Eagle Heights elected to install wall-mounted ACTIVboards with the built-in ACTIVstudio software tools and resources. The learning solution also includes an ACTIVslate, which allows teachers and students to control the whiteboard from anywhere in the classroom, and a set of ACTIVotes, 32 handheld voting devices that provide teachers with instant student feedback. Additionally, each class received the ACTIVtablet, which allows teachers to develop lesson plans and flip charts when away from the board or at home.

The decision to incorporate a comprehensive system in every classroom came as a result of teacher enthusiasm and student achievement.

“We believed that if we could engage the children in their individual learning process, then their attention span would expand, their interest level would increase, and ultimately their test scores would rise,” said Mansfield. “What we witnessed was an absolute metamorphosis.”

And while the excitement for this revolutionary technology is palpable, the school staff has remained clearly grounded in its stringent academic goals for the Promethean system—increase student attention and interaction. These goals have had a direct impact on improving student achievement and student retention.

Fourth-grade teacher Diana Zidian uses the camera feature to snap a picture of a writing sample that is placed on the ACTIVboard for students to revise and use as a whole class activity.

Third-grade teacher Cyndi Martin reinforces mathematics by showing stored flipcharts with previous lessons highlighted. “If a child has a question about addition or subtraction—something we covered earlier—I just push a button and I have all my notations. Plus, I can use the 100s chart as a background. Everything we covered is just a click away.”

Zidian adds, “I’m able to instantly provide background knowledge to render our texts meaningful. Not to mention

... continued on page 7



... continued from page 6

the color graphics and music—the novelty of this technology will never wear off.”

Martin also uses Promethean’s ACTIVprimary, the first electronic whiteboard software program designed specifically for primary-age classrooms. And just as the ACTIVstudio software offers unmatched libraries of images, background materials, and annotation resources for all students, ACTIVprimary—with its big tools, activities, games, and resources—is geared for young learners.

Other teachers rave about the ACTIVote. Martin noted that her in-class participation shot up 90 percent when she started using the ACTIVote. “The students absolutely love voting, but I love its classroom management features. In named mode, I use it as the way students can raise their hands instead of shooting out an answer. I ask them to press A if they want to be called on, and then I am able to see on the ACTIVboard which names light up. I can also anonymously give each student a number, from one to twenty. When answers are cast, I can determine each student’s answer.”

Zidian regularly uses the ACTIVote to assess her students’ understanding of subject matter to be sure they are reaching their learning goals.

Results

“By using all of the online resources in conjunction with the Promethean system, our staff is now able to more effectively teach to state and federal standards and frequently assess their mastery of prime subjects,” said Mansfield. “This one-two punch of resources and collaboration, coupled with ease of use, has directly affected the immense academic gains our students are enjoying.”

“We believed that if we could engage the children in their individual learning process, then their attention span would expand, their interest level would increase, and ultimately their test scores would rise. What we witnessed was an absolute metamorphosis.”

– Linda Mansfield, master teacher
Eagle Heights Academy, Youngstown, Ohio

“The benefit for me as an educator means I can quickly determine what I need to do to be sure my students are on track,” said Zidian. “I can review any materials that are proving problematic, or I can skip ahead if it’s warranted.”

Alex Murphy, Eagle Heights superintendent, is convinced it’s the intangible benefits provided by the Promethean system that make the difference—and are the reason why he didn’t rest until every teacher at Eagle Heights had this collaborative teaching solution in their classroom.

Zidian adds, “Once we were exposed to the ACTIVboard system, we knew that the way we had been teaching would change forever. The ACTIVboard Collaborative Classroom System has become my primary teaching tool—every day, for every subject.”



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Atomic Learning helps teachers integrate technology

Web-based tutorials, available 24-7, give this district's staff training efforts a huge boost

Five years ago, Fred Mindlin and Mark Rogers were told to put together a district-wide technology plan for California's Pajaro Valley Unified School District (PVUSD). The priority of the plan was to assess how technology could support and enhance literacy skills at PVUSD, which were below state guidelines.

One component of the plan called for Mindlin and Rogers to incorporate technology resources that could be used by both teachers and students. After a cursory look at the district's integration of technology in the classroom, both knew the success of the plan depended on getting teachers comfortable using technology—a daunting task when one considers that less than one-third of teachers nationwide feel adequately prepared to use technology in the classroom.

Another concern involved teacher training and the time involved to do so. Julie Harvill, the district's Instructional Technology Support Specialist, instructs staff on the software they need to use in their classrooms. Stretched thin in this 19,000-student district, she usually has one hour to

"Since I have incorporated Atomic Learning into these training sessions, my students have shown much more progress in the hour we have together."

— Julie Harvill, Instructional
Technology Support Specialist,
Pajaro Valley Unified School District


spend with teachers on new software, all of whom have varying degrees of comfort with technology. "Technology integration has been unreachable for most of the staff who are focusing on state and federal No Child Left Behind requirements," Harvill said.

Through significant research on the Internet, Mindlin and Rogers found several web sites that offered online technology training. However, they soon found that only one, Atomic Learning, was geared to the K-12 education market and had tutorials for the majority of software programs Pajaro used in the classroom. Like many districts, Pajaro supports Macintosh and Windows software, and Atomic Learning provided online tutorials for both, accessible around-the-clock, at school or home via the Internet. The pair of coordinators believed Atomic Learning was a significant part of the answer to their technology needs. The PVUSD school board agreed and voted to subscribe to Atomic Learning for one year.

Harvill began using Atomic Learning and its unique web-based software training and tutorials to help her with the challenge of training teachers in the short time available. "Atomic Learning's tutorials consist of one-to-three minute, easy-to-understand movies that help individualize training. This allows 'tech-savvy' teachers to progress independently using Atomic Learning's tutorials while I provide individual help to the teachers who are struggling," Harvill said. Before long, each teacher in Harvill's classroom was progressing at an individual rate with the help of Atomic Learning's tutorials.

"Since I have incorporated Atomic Learning into these training sessions, my students have shown much more progress in the hour we have together. Plus, they can go back into their classrooms and continue to learn more about the software programs they use by viewing new movies they didn't get to in the class or reviewing ones on applications they may have forgot," Harvill stated.

Many teachers at PVUSD are now learning new software programs and incorporating them into their lesson plans for subjects such as reading and math. Monica Cesarello is one of the most enthusiastic of these teachers. She has seen the impact of using technology with her struggling readers. Cesarello uses Kidspiration, a software program that has been shown to improve reading competency; she learned to use this software through Atomic Learning tutorials introduced in one of Harvill's training sessions. She continued to use the tutorials as needed in her classroom and has seen reading skills improve dramatically through the incorporation of Atomic Learning and Kidspiration. "I just really love it," Cesarello said, "The way it is set up is just perfect. Everything I can think of is covered, and it is broken down into little pieces to make learning quick and easy."

Mindlin and Rogers are very happy with the positive impact Atomic Learning has had on the staff and students at Pajaro. So happy, in fact, that the school district has now been a subscriber for three years and plans to continue to subscribe indefinitely. "The potential for Atomic Learning is awesome. We are just beginning to see the impact it will have on learning at PVUSD," Harvill commented. 



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Beacon City School District Goes Digital With VBrick's EtherneTV

Located in New York's Hudson Valley, the Beacon City School District's IPTV Network Provides Teachers, Students, and the Community with Engaging Educational Content. VBrick's EtherneTV Empowers the District to Provide On-Demand Capabilities, Stream Cable Programming and Student and Community Productions Across its Network.

Located 65 miles north of New York City, the Beacon City School District (Beacon CSD) serves a diverse population that represents many cultures. Beacon CSD is committed to using teaching best practices and technologies to educate its 3,600 students while increasing communication and collaboration across the district – while also supporting the community.

To achieve these goals, Beacon CSD unveiled Beacon IPTV, an advanced video network that provides video streaming and video on demand capabilities throughout the district to its students, 450-person district staff, to the surrounding community via the Internet. Beacon IPTV provides the district with a cutting edge tool to enhance curriculum while cutting video networking costs.

Beacon IPTV is powered by VBrick Systems, a digital video systems provider. Specifically, Beacon CSD is using VBrick's EtherneTV system to simultaneously record and broadcast DVD-quality video across its Beacon IPTV network to every classroom and nine networked district buildings. Students and faculty enjoy state-of-the-art digital educational programming approved for teachers' curriculums, student-produced news and campus-related programming, staff messages, as well as live cable television feeds. In addition, members of the surrounding communities view weather-related school updates and community programming over the Internet on a low-bandwidth Beacon IPTV channel.

"IP Video is the wave of the future for organizations such as ours, allowing us to advance our lesson plans and stretch our IT budget by three times," said Charles Symon, Assistant Superintendent for Media & Operations Beacon City School District. "We are now able to present our teachers and students with a system that delivers digital video at a higher level of quality that will not diminish over time, as happens with videotape and standard cable. Our VBrick-powered IPTV system has transformed our homegrown district television network into a cutting-edge digital video system."

Creating, Distributing, and Managing Beacon IPTV Programming

To broadcast a student production or event on campus, users simply bring a portable VBrick appliance and a video camera to a site and plug the appliance into any existing campus data



network connection.


The video camera captures the event and

the VBrick appliance compresses the video feed into MPEG-2 format. The compressed video is sent across the network to campus desktops or network-enabled televisions. Video is stored indefinitely on the EtherneTV-VoD Video-on-Demand Server for playback at any time through the EtherneTV Media Control Server.

Students and faculty can then access that video on computer desktops or networked televisions through easy-to-use on-screen guides similar to those on home Digital Video Recorders. EtherneTV-enabled Beacon IPTV feeds are viewed with the standard Apple QuickTime player or by using VBrick's free PC StreamPlayer software. Set-top boxes for televisions also allow playback via remote control on televisions.

Building on IPTV Success

The district plans to enhance the systems' broadcast capabilities in the future by increasing the number of cable television channels broadcast on the network from one to eight, and expanding the reach of its videoconferencing features from one-way to two-way.

Beacon CSD plans to expand the network to be one of the most innovative IP-based educational video networks in the country. Plans are in place to videoconference between classrooms so that students can collaborate on projects with their peers across town. Additionally, by streaming a single presentation to multiple viewers (multicasting), staff in-service will view training and other presentations from multiple viewing locations without moving to a single meeting location. In addition, when producing an in-house video mini lesson or staff training, the schools will archive these for future viewing on the video on demand system. 



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Sagebrush Viewpoint™ Provides California District with Timely, Complete View of Student Assessment Data

When an urban-suburban school district in Sacramento, CA set a plan in action to improve student achievement, they knew a key element of their success required a better way for teachers and administrators to collect, analyze, and report on student data.

THE PROBLEM:

Difficulty getting timely data into teachers' hands

In 2004, Grant Joint Union High School District, a district serving grades 7-12 at 19 different sites ranging from high schools to special education schools, embarked upon a comprehensive reform effort to increase student learning and improve instruction. To successfully achieve this goal, administrators realized that they needed to emphasize the importance of all teachers being able to collect, analyze and report data in a timely fashion. Phil Spears, the district's Research and Evaluation Consultant, lead the effort and helped them define the key obstacles to their reform plan. At that time, pulling and manipulating data from their multiple district data systems was too time consuming. Consequently, their reports couldn't provide a complete view of their students, lacking information such as previous years' test scores and local assessments. And because the district didn't have an easy way to get data to teachers and principals, reports were out of date by the time they were delivered.

In order to overcome these obstacles and accomplish their objective, the district needed a flexible system that would not have limits on the type of student information the district could make available to district staff, especially to teachers.

THE SOLUTION:

A customizable, easy-to-use data management and analysis tool

When the district was evaluating data management systems to use with its 12,600 students, its goal was to find a program that was fast, flexible and easy to learn and navigate. Based on these criteria, the district found Sagebrush Viewpoint superior to all other data management and analysis products evaluated.

The district's student population is very diverse, so it was important for the district to start understanding their students and how they are performing. With the addition of Viewpoint, all educators in the district, principals, administrators, and especially teachers, now have immediate access to the district data they need to see as defined by the district. Viewpoint helps them bring together data from multiple data sources to give them a complete view of each student, so they can monitor individual




Sagebrush Viewpoint provides teachers immediate access to relevant student data.

student performance, detect any trends, and better guide curriculum development. And, Viewpoint has no limits as to the type of student information a district may make available to its educators, so the flexibility is endless.

While the district plans to have every educator trained on Viewpoint by the end of 2005, many educators have already begun using the tool, and to date, the response is overwhelmingly positive across the district. Already, Viewpoint has helped the district:

- Analyze longitudinal student performance on California Standards Tests (CST) district-wide, by school and by teacher.
- Create CST Cluster score performance charts down to the individual student.
- Analyze the relationship between the standardized test, local benchmark assessment scores, and student course grades.
- View all assessment scores on one report, including CAHSEE, CELDT, SCT, ACT/SAT, and CAT 6, for both current and previous years.
- Monitor established student learning targets and goals for the district and individual schools as measured by Performance on California Standards Tests.

As the district moves forward with its comprehensive reform effort, Viewpoint will continue to play a critical role in helping them measure their progress for increasing overall student and school performance. 


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Educational institutions, where more and more people are learning their computer skills, represent a unique and complex learning environment from a technological standpoint. Computer labs must provide the appropriate equipment to instruct students in technological learning that meets the highest requirements, and they must provide state-of-the-art equipment that is consistently operable and available. This is growing increasingly difficult to achieve, because of the volume of multiple users in educational labs, the multi-faceted threats facing the educational technology industry, and the limited IT resources available to manage these labs.

Learning computer skills is a necessity for today's students, but there are several problems that educational institutions must deal with in their day-to-day management of computer labs.

The Problem of Unwanted Software

In today's computing environments, IT professionals face the daunting task of keeping expensive computing resources free from unwanted or illegal software. The high volume of multiple users on lab machines in an educational environment means users are accessing web sites or using removable media that could potentially invite malware or known but non-educational software into a system. As a result, computers often can become unusable. Schools are faced with high technical support costs to constantly manage the problem of unwanted software, which often involves re-imaging or rebuilding machines.

Malicious Users and Innocent Clickers

Students are growing more computer-savvy every day and can be more knowledgeable than their instructors in certain areas. They are capable of downloading programs that can damage a computer—file-sharing and P2P programs, key-loggers, and several other programs that can take up bandwidth and affect the efficiency of the lab and of the system. Conversely, “innocent clickers,” who are unaware of the consequences of their actions, also can cause serious damage to an operating system.

Between these two types of users, IT administrators are continually fighting user “sabotage” of software and managing changes made to operating systems that cause computer configurations to be inconsistent across an enterprise. The programs that students download also can be a serious hindrance to their productivity in the classroom.

IT Resources

In education, a typical ratio of IT support staff to computers is 1 to 500. Not surprisingly, IT staff are frequently stretched to the limit, and often spend the majority of their time re-imaging and rebuilding machines to keep them up and running. As a result, IT staff would prefer to lock down the machines to prevent users from damaging the machines so they don't have to spend all their time rebuilding them. This means IT staff could have more control over classroom policy than teachers do, because the IT staff don't want or don't have time to be constantly rebuilding workstations.

Security Approaches

The volume of malware and malicious code in the form of rootkits and Trojans is increasing everyday. The response to this problem has created a new industry of antivirus and anti-spyware software and solutions, as well as an increasing need for IT staff to have a measure of control over what happens on workstations.

Lock Down and Reactionary versus Non-Restrictive

The most common response to the technological issues facing education has been restrictive. IT staff lock down computers to prevent any mischief on the part of the students, or as a defense against malware. This response means less rebuilding of machines, but can place severe restrictions on the part of the students' learning environment.

The reactionary approach means dealing with computers on an individual basis and using re-imaging or rebuilding as a method of keeping computers uniform and protected. However, the problems with this approach are many, given the amount of time it takes for the rebuilding process and the correlating downtime of the machine. This approach is also only a temporary one and does not deal with the underlying cause of the problems faced by the labs.

With the non-restrictive, reboot-to-restore concept offered by Faronics Deep Freeze, IT staff can be assured of not having to



What a fantastic product Deep Freeze is. It is the only software product I know of which you can set it and forget it.

– David Park, King City Union School District

re-build damaged workstations, and students still can have unrestricted access to computers. Deep Freeze instantly protects and preserves original computer configurations, eliminating routine IT maintenance while allowing complete, unrestricted access to a workstation. Regardless of the changes made to a workstation, simply restart to reset the computer to its original state. The result is a protected, parallel network, free of viruses and unwanted programs.

I have found Deep Freeze to be one of the best tools at our disposal for ensuring the integrity and longevity of our student lab computers.

– Forest (Pa.) Area School District

This approach allows students to learn in an unrestricted environment without damage to the computer. Students can freely learn about operating systems and experiment with different programs; the computer's original configuration is always restored upon reboot. IT staff do not need to spend valuable time rebuilding or re-imaging machines, because any malware on a computer is gone with a simple reboot. The time saved allows IT personnel to concentrate on other tasks.

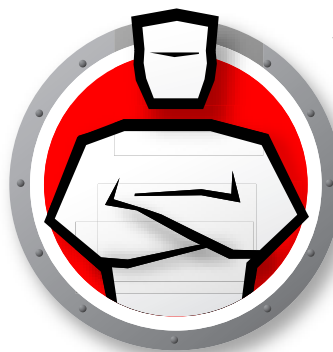


Blacklist vs. Whitelist Solutions

One of the largest categories of traditional responses to malware is blacklist solutions, usually in the form of antivirus and anti-spyware software. A blacklist is a list of particular entities, whether domain names, email addresses, or viruses, that are considered dangerous or damage-causing and are denied entry to the infrastructure they are trying to penetrate.

Blacklist software works by blocking known threats. Antivirus software companies have a list of known viruses that they provide to their subscribers. When a new virus becomes known, the antivirus companies create a defense against it and provide that update to their users.

An advanced blacklist solution is heuristic software. Heuristics is the application of experience-derived knowledge to a problem. Heuristic software looks for known sources, commonly-used text phrases, and transmission or content pat-




terns that company history has shown to be associated with email containing viruses. Heuristics is a term coined by antivirus researchers to describe an antivirus program that detects viruses by analyzing the program's structure, its behavior, and other attributes, instead of looking for signatures.

Whitelist technology is the opposite of blacklist technology; the list of entities, whether domain names, email addresses, or executables, is a list of what is allowed to penetrate a system. For example, a whitelist of domain names is a list of URLs that are authorized to display, despite any rules of an email spam blocker program.

Faronics Anti-Executable software takes this approach to dealing with malware. Faronics has designed it to approach security as a system control issue. Anti-Executable allows administrators to choose which applications will be authorized to run on a workstation. Any executable not authorized by Anti-Executable will never install or run. Instead of being configured to block executables that are not wanted on a system, Anti-Executable is configured to authorize executables that are wanted on a system.

This provides a solution to ensure all programs and applications loaded as part of a standard system configuration are the only ones authorized to execute. However, adding new executables to the configuration is simple and fast.

Anti-Executable provides protection against day-zero attacks simply because the program will not recognize them as authorized. Downtime as a result of malware is greatly decreased and productivity is greatly increased, because students are prevented from downloading distracting and time-consuming programs.

Deep Freeze and Anti-Executable are extremely compatible. While Deep Freeze ensures a secure and non-restrictive environment, Anti-Executable keeps users on track because they can only run authorized programs. 

Tests demonstrate what a robust product Anti-Executable is, and the entire Faronics team is to be congratulated for creating such an intelligent solution.

– Richard Jones, Riverside, Calif.

To protect your systems with non-restrictive technology and whitelist software,
download free evaluation versions of

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Toll Free Tel: +1-800-943-6422

Email: sales@faronics.com

identiMetrics Brings Biometrics to Strom Thurmond High School



Strom Thurmond High School is located in Edgefield County, South Carolina and is considered a regular high school located in a rural area. Seventy-seven percent of the 1012 students attending are on a free or reduced lunch program. The motto of Strom Thurmond High School is "Preserving the Past, Shaping the Future." Strom Thurmond continues its positive history of tradition while at the same time is moving forward in curriculum and preparing students for the future. The biometric student identification program from identiMetrics is helping us do just that.



Greg Thompson
Principal

As principal, I'm always interested in improving safety and efficiency in my school. One challenge has been accurate student identification in our cafeteria and library. We were using student ID cards with PINs. Many students would show up every day without their cards and would be sent to obtain temporary or replacement ID's. This was extremely disruptive and significantly extended the time it took us to settle the school down every morning. We obviously needed a better solution.

We wanted something that students could not forget, lose, damage or steal. But it had to be compatible with our existing cafeteria and library software and it had to be cost-effective.

We decided that fingerscan biometrics was the solution. Students would never forget their fingers. We found several cafeteria applications that sold a fingerscan biometric device, but all of them wanted us to spend thousands of dollars to buy their application and replace our already existing and working software. Then, we found a company called identiMetrics.


identiMetrics' solution, identiFi™, scans a student's finger for identification. It seamlessly integrates with any cafeteria application that uses swipe cards, PINs or bar codes, so there's no need to spend money to replace what you already have. identiFi can operate in a single lunch line or provide identification throughout the entire school district. After we had Norm Rischbieter, from Retail Dynamics in Trenton, South Carolina install the software, we discovered an added bonus. identiFi can also be used to identify students in other areas of the school like classroom attendance, library, nurse's office and for security access at the front door. identiFi provides a single identification solution and integrates with the different applications you already have in place.

Biometric fingerscan identification was well accepted by the Board, Superintendent, teachers, parents and the community. They all understood our need to correctly identify students and realized the disruption and cost required to administer the card program. Initially, there were questions regarding privacy. But

identiFi doesn't take an actual fingerprint, just unique identifying points. Everyone felt comfortable that the fingerprints can't be recreated. Our school board was convinced in advance and we no longer require our students to wear their ID badges. They just need to have them available if asked. As a result, the school settles down within 10 minutes most mornings, a major improvement! We have also significantly reduced the number of disciplinary actions required when students forget their ID badges. An unexpected benefit is that eliminating an entry point into our disciplinary system has already reduced the number of student suspensions we are experiencing!

How's it working? Our foodservice and library staffs mastered the program easily. Lines move quickly and account records are accurate. Our cashiers and librarians no longer have to type in the student identification number for students who forgot their cards.

Students adapted quickly. They no longer need to look for their cards, get replacement cards, go to the end of the line when they don't have their cards, feel embarrassed if they are on free or reduced lunch, or spend time in detention for not having their cards. Now, students ALWAYS have their ID with them!

Today, biometric technology is evolving and is no longer limited to just government applications. Like the computers that have become an integral part of our schools, homes and businesses, biometric identification is the next step in making things work better, faster, safer and more reliably. Edgefield County Schools is among a leading group of school districts around the country using identiMetrics' biometric student identification. In the future, we plan to expand the biometric ID program to the tardy office and eventually to classrooms for attendance. We are proud to be leaders in this type of technology. Our students will benefit from our efforts to be among the best! 



610-993-9042
www.identiMetrics.net

Tech-savvy educators offer candor and insights on what works

Use these free tools from eSchool News to keep pace with the ed-tech community

The **eSchool News Conference Information Center (CIC)**—available all year long, 24/7—brings you an educator’s-eye view of the most important developments at the field’s most important ed-tech conferences. The information you acquire here can literally change the way you approach your job and thereby make a huge difference for students in your schools.

During the dates one of those key events is actually under way, eSN’s CIC gives you daily coverage of prime speakers, notable attendees, and major announcements made at the conference.

eSchool News goes beyond traditional conference coverage with a unique feature in the **Conference Information Center** – peer reporting by volunteer educators. By enlisting a large number of volunteers, eSchool News is able to tell the story of each workshop from the educator’s perspective. You’ll get a sense of the session and how relevant it was to someone just like yourself.



“Being part of the reporting group actually gave me a different look at the conference,” said Sharon Betts, a director of educational technology for Maine School Administrative District 71 in Kennebunkport, who filed reports from NSBA T+L².

Check out her reports and those of her colleagues at the eSN Conference Information Center. You can rely on your peers for reality-focused reporting that illuminates the issues that matter most to educators.

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eSchool News’ **Ed-Tech Insider** is a dynamic community of tech-savvy educators, communicating via “blogs,” short for “web logs.” eSchool News wanted to step beyond the fad and provide practical value to educators by creating an online community to turn the promise of technology into practice.

Good blogs, however, require good bloggers. And while there are many educators with expert opinions on school technology, there are not as many skilled and experienced with blogs. To locate such people, eSchool News enlisted the help of Clarity Innovations, a company based in Portland, Ore. Clarity Innovations has been a pioneer of the effort to bring blogs to schools, and also produces official blogs for major ed-tech conferences.

eSchool News and Clarity Innovations spent several months formulating what would become the eSN **Ed-Tech Insider**. Together, the organizations recruited a team of all-star ed-tech bloggers, each of whom had been posting opinions and advice on the internet for at least a year. Here are just a few of the people you’ll find in our eSN **Ed-Tech Insider**:

- Will Richardson: A recognized leading resource for the use of blogs in education who has been quoted in both *The New York Times* and *The Wall Street Journal*.



- Anne Davis: An instructional technology specialist based at the Georgia State University College of Education and a frequent presenter at regional and national conferences.
- Tim Lauer: A school principal who in 1994 developed one of the first web sites in the nation for an elementary school.

Ed-Tech Insider Richardson told the *Times* that blogs mean “class doesn’t have to end when the bell rings.” The same is true for meaningful discussions of technology and learning – which now exist 24/7 at the **eSchool News Ed-Tech Insider**.

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