

Tech Connection

Levittown Public Schools
www.levittownschoools.com



The Future of Wireless

The rapid increase in new Wi-Fi-based mobility devices has created a distinct set of challenges for the District and the Computer Department. Personal Smartphones, tablets, and laptops are extremely common these days. Looking back five years ago, many households may have only had one personal computer which was shared within the household. Now teachers may have several devices: an iPhone, iPad, and a desktop computer. Connecting these devices has brought its own set of challenges to the Department. The Computer Department has both short term and long term plans to meet these challenges.

Short Term Plans:

Provide network connectivity to all staff members and high school students while at home using a variety of Wi-Fi based mobility devices.

Levittown currently utilizes Citrix as the re-

mote gateway to the infrastructure. This system allows staff members to connect to the network to access basic applications and network storage drives. Citrix is also being used in the corporate world to provide secure access while manufactures such as Apple work to develop mobile operating systems that keep the enterprise network environment in mind. This is proving to be a very difficult challenge for these manufacturers and is the number one reason why mobile devices are not widely supported or accepted in large enterprise environments such as Levittown's network.

This summer the Computer Department plans on eliminating Citrix and configuring the systems to use Windows to connect to the network from home. Citrix licensing is extremely expensive. To this end, the technicians are testing other technologies that will provide similar connectivity at an extremely reduced price. The savings and ad-

vancements recently made in server virtualization will offer high school students the ability to connect to school in the same fashion as staff. Bridging this gap will permit the exchange of electronic information from teacher to student.

The Department is also testing mobile connectivity applications which will permit selected devices to connect to the infrastructure. While there may be free applications for email and other connectivity, these applications do not provide the level of security that the District must demand. The changes that we are planning on implementing will require higher security and encryption to protect the integrity of our systems. *Please note: While we will do our best to adopt a variety of mobile devices, we will not be able to support all of them. If you are considering purchasing new Wi-Fi enabled mobile devices, please contact the Computer Department via phone for direction on which devices may*

be supported in September.

Long Term Plan: While currently hosting a wired network, the Computer Department has been working with different vendors to choose the right wireless technology for the future. Over the next three years, we will be installing new network equipment in the buildings. This new equipment provides the ability to connect wireless access points, surveillance cameras, IP telephones, and other POE (Power Over Ethernet) devices. This project also improves the performance and speed of the wired network used by all classroom and office computers. President Obama indicated in the recent address to the union that he plans on providing wireless access to 98% of Americans.

<http://newenterprisearchives.com/20110210/obamas-wireless-broadband-plan-98-percent-or-bust/>

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Network Upgrades



The Computer Department is in the beginning stages of upgrading the backend equipment that runs the network. All of the network drops in the buildings converge to centralized locations known as wiring closets. Within these wiring closets the magic of computer networking takes place. The network drops are

plugged into a device known as a switch. A switch plays a role similar to that of an old school telephone operator sitting at a switchboard, except instead of connecting two phones together it is connecting two computers together to exchange information. Currently these network switches connect the dis-

trict's desktop computers at a speed of 100 megabits per second but our desktop computers are capable of connecting at a much faster maximum speed of 1000 megabits (or 1 gigabit) per second. This upgrade project will increase the overall speed and performance of the network and ensure it can handle future demands.

The Future of Wireless (continued)



As more details emerge about this program, the Computer Department will continue to monitor the impact of this program upon the decisions on implementing wireless technologies throughout the district. As the cost of implementing wireless access points in our district could cost upwards of \$140,000 per building, selecting and implementing the right devices are crucial in ensuring that this decision will support all District needs. Taking this into consideration, our primary long term goal is to encourage the use of personal computing devices within our buildings. Adopting wireless technology while modifying our infrastructure and policies will not only improve educational computing for both students and teachers, it

will save the District money.

The future is a bright one as we all work together to:

- Provide teachers and staff with the access and technology needed to improve the delivery of instruction.
- Provide teachers and administrators with the training needed to successfully adopt current and new technologies.
- Securely integrate iPads and other mobile devices with into our enterprise network.
- Provide teachers and students with secure network access based on who they are - no matter where they are, what devices they use or how they connect.
- Deploy one manageable and cohesive access infrastructure.

- Develop wired and wireless policies to provide clear guidelines for both students and staff.
- Effectively rightsizing our infrastructure to accommodate current and future technologies (computers, mobile devices, tablets, phones, surveillance, and other devices).

The Computer Department will continue to investigate Wi-Fi mobile devices. The adoption of these devices will drastically change how we manage and secure our infrastructure. These are the most difficult challenges IT departments and universities have faced. We thank you, in advance, for working with us to meet our goals. If you have any questions regarding the topics discussed, please do not hesitate to contact the Computer Department.

NEW Electronic Software Requests Form

Did you know that the paper Software Request Form is now obsolete? That's right. The Computer Department has released an electronic version of the form which aims to reduce paper consumption and ease in the process of tracking software requests for a class-

room or lab.

To utilize the new electronic form:

Please visit the Computer Department intranet page at: <http://share.levittownschools.com/computer/>

On the left hand side of the page under "Forms",

click on "Software Requests".

Click the "New" button to start a software request. Watch for other electronic versions of departmental forms including the Hardware Request form in the very near future.....



Server Room Consolidation

During the past two years the Computer Department has been virtualizing many of the servers. The term virtualize means that many servers can be run from one central server instead of having a separate physical server for each purpose. Each server has its own responsibility including home and shared folder storage, PowerSchool, E-

Mail, Citrix, Finance Manager and many more. In total the Computer Department has virtualized 19 servers over the past two years. During this time many servers have been removed from the server room leaving large gaps making it difficult to properly cool the room. After much planning on February 5, 2011 the entire server room was shut

down, disassembled and reorganized. At the end of the day all of the servers and networking equipment had been condensed into four racks instead of the original six racks. Having all of the equipment in four racks has eliminated the gaps allowing the server room to be properly cooled. Thanks to the help of Joe Carbonaro from B&G all of



the power protection equipment was moved to one location to better manage the power for all of the equipment and allow for maximum uptime if there should be a power failure. Our thanks for a great job to: Todd Connell, James Wagner, Leo Vanderburg Derek Teitel and Vishal Bhoge.

Wireless?

Today, mobile devices such as iPads, smartphones, netbooks, and laptops seemingly shift the demand from wired to wireless. Wireless access

points however are just endpoints which still lead back to the same wiring closets in the buildings. Therefore, to prepare for the future of more wire-

less options in the buildings, we still must first start by upgrading our existing backend wired equipment.



Looking for Professional Development?

Look for some professional development? Valerie Ekerman, the professional developer, will be happy to meet

with you at your school.

Go to:

<http://share/computer/Shared%20Documents/>

[Forms/AllItems.aspx](#)

And click on Professional Development for the available courses.



Teacher's Corner

Take a Virtual Field Trip:

Statue of Liberty Cam: <http://www.earthcam.com/usa/newyork/statueofliberty/>

See some wonderful pictures of this US landmark via this site. Be sure to check the archive options for some superb pictures which students can use for projects.



San Diego Zoo: <http://www.sandiegozoo.org/livecams/>

Here you will find web cams for the panda, polar bear, elephant and ape habitats at this well known zoo. The camera images stream live from the zoo and provide fascinating looks at these animals. You can also access a number of other videos.

Old Faithful: <http://www.nps.gov/yell/photosmultimedia/yellowstonelive.htm>

Watch a number of geysers at the Yellowstone National Park erupt via this web cam. The still image updates every 30 seconds.

USDA Air Quality Images: <http://www.fsvisimages.com/descriptions.aspx>

Visit this site to see web cam views on several locations across the US. The map provides access to all the sites. Hover over a location and you will see a still image from the camera. Great for Science Classes.

Current Events:

Newseum Front Pages: <http://www.newseum.org/todayfrontpages/>



Through a special agreement with more than 800 newspapers worldwide, the Newseum displays these front pages each day on its website.

Time for Kids: <http://www.timeforkids.com/TFK/>

Start with the Teachers site and explore the range of lessons divided by grade levels (K-1, 2-3, and 4-6) Worksheets, mini-lessons, and graphic organizers are available via PDF format.



Scholastic New Online: <http://www2.scholastic.com/browse/scholasticNews>.

Explore the Top News story with students of most ages.

Web Site Evaluation:

The Five W's of Web Site Evaluation: <http://kathyschrock.net/abceval/5ws.pdf>

Helpful guide give you a straight forward look at evaluating web sites. Works well with students of most ages. File is in .pdf format.

Videos:

WatchKnow: www.watchknow.org



Hundreds of thousands of great short videos, explaining topic taught to school children. This is a completely free service, and all the features listed here (and more) will always be free. This service is courtesy of the non-profit Community Foundation of Northwest Mississippi, and was designed by Wikipedia co-founder Larry Sanger with input from the Lausanne Collegiate School and a group of colleagues.



Library of Congress Video Options: <http://memory.loc.gov/ammem/index.html>

Browse the vintage collection of Coca Cola commercials, see Americans at work and play, check out information on Presidential inaugurations by checking the selections available from the Library of Congress.



GREAT SITE FOR ELEMENTARY TEACHERS

THE ADVENTURES OF CYBERBEE

[HTTP://WWW.CYBERBEE.COM](http://www.cyberbee.com)

