

Upper Perk Tech Pulse

Keeping You Informed on UPSD Technology

Special points of interest:

- Internet bandwidth has been increased from 300 Mb to 400 Mb
- Password security is everyone's responsibility
- Wireless issues at Hereford and Marlborough seem to be fixed
- Middle School is getting a new Tech Assistant
- Work is continuing to strengthen the HS network

The purpose of this newsletter is to keep everyone informed of the goings-on of Technology in Upper Perkiomen School District. Each month the status of projects and challenges will be updated and any new changes will be announced. We hope you find it informative and beneficial!!



Internet Bandwidth Increase

On November 10, 2016, the Upper Perkiomen School Board voted to increase the District's Internet bandwidth from 300 Mb to 400 Mb. The change went into effect the very next day. In the 2015/2016 school year, the bandwidth was 250 Mb. The increase was necessary due to a larger-than-expected increase in Internet usage from last year. With the growth in online, cloud-based resources such as MAP, Schoology, and Google Apps, the District was hitting its bandwidth limit several times per week. Once that was identified, steps were taken to increase the available bandwidth.

Since the increase went into effect, the District has not hit the limit. The 400 Mb seems to be sufficient for now. However, careful monitoring will be needed to see if another increase is necessary for next year. Another grade level will be rolled into the 1:1 Future Ready plan, so the District will be fully 1:1 in grades 6-12. That will mean an additional 275 computers will be connecting, all drawing on the same bandwidth.

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Did you know?

When you walk away from your computer, you can lock it so nobody can use it while you're gone. Simply press and hold the Windows key and the L key.



How Giving Out Passwords Can Hurt You

In October, a phishing campaign resulted in several staff members giving out their usernames and passwords. The emails they received which tricked them were very cleverly worded. They had a link to a legitimate-looking website, but the site was really just storing usernames and passwords of victims for later use.

Once the spammers had usernames and passwords, they logged onto those email accounts and started sending fake loan offers at a rate of 50,000 per day. Those fake loan offers were tricking other people into giving out their names, address-

es, social security numbers, etc. The spammers then had those victims' identities and could open accounts in their names. That is how the whole scheme is monetized. If only they could put that effort toward positive goals...

This spam storm coming from UPSD resulted in us being listed as spammers in several filters, which led to problems sending legitimate email for a week. Once those spam scores go up, the only way they come down is on their own over time.

We were able to determine that the login attempts were coming from

Nigeria, and we blocked all traffic from that country. That stopped the attack, but it could as easily have come from America, and we can't very well block all American traffic.

The only way to prevent these attacks is to never give out your password. The Technology Department will never ask you for your password in email. If you receive an email asking for a password, please notify the Technology Department so we can investigate it.

Hereford Elementary School Update



Meraki MR26 Access Point

After several weeks of sporadic losses of connectivity in the Hereford FLITE room, the issue is fixed.

We checked our servers, network switches, Internet bandwidth, etc. and everything was working the way it was supposed to. The only thing remaining was the specific Access Point (AP) in the classroom. We contacted Meraki, who manufactures

the APs in Hereford and provides the system for managing them. After several days of troubleshooting, Meraki determined that there was a software bug in a recent update that was installed on all of the APs. Even equipment like APs has software. The bug was preventing computers from registering on the network. On the evening of November 14, all of the APs

in Hereford were rolled back to an older software version.

Since then, things have been running much better. Meraki is continuing to investigate the root cause of the software bug and will have it fixed in a future update.

“Three days after beginning the diagnostics, Meraki confirmed that it was the same problem as Hereford.”

Marlborough Elementary School Update

Similar to the issues we had in Hereford, and ultimately the same root cause, Marlborough experienced wireless connectivity problems.

The problem was affecting classrooms around the elevator, which had the same model AP as the Hereford FLITE room, the Meraki MR26.

After several days passed at Hereford without problems following the software roll back, we requested that Meraki rollback Marlborough. Unfortunately, they wouldn't do that without first having us go through a number of diagnostics to prove it was the same problem.

Three days after beginning the diagnostics, Meraki confirmed that it was the same problem as Hereford. They agreed to roll back the software in Marlborough on November 29. It's a little too early to declare victory, but so far the problems have not recurred.

Middle School Update



HP Chromebook

The Middle School will soon have a new Technology Assistant! Lorraine Carawan will be joining on January 3, 2017. She will be a welcome addition to the team. Lorraine has previously worked in similar roles in Hatboro-Horsham and Centennial School Districts. Until then, Marianne and Janet will continue each working one day

per week at the Middle School to help out, and will help Lorraine get settled in for the first couple of weeks she is on board.

In other news, the new wireless network is fully up and running. After a week of fine tuning, feedback has been entirely positive. The system seems to be having the intended effect.

Chromebook failures seem to be increasing. With tickets being submitted for them, we can see that more are suffering hardware breaks than we expected. We're exploring what can be done. Options discussed include purchasing more spares or moving to more robust Chromebook models. No decisions have been made yet.

High School Update

There are always a lot of things going on at UPHS, and November was no exception. Here are some of the big things that the Technology Department has been doing at the High School.

First, we are continuing to add Access Points to all classrooms to improve the 1:1 wireless connectivity. We also recognized that the Meraki APs don't let go of computers as they move around the building. Therefore, we've recommended that students turn off their wifi, or restart their laptops, each time they move to a different classroom. That ensures they connect to the nearest AP.

Carnegie Learning in the Math Department relies on Java, which is unsupported by most browsers now. Chrome and Safari haven't supported it for years, and now Firefox doesn't either.

We are pushing out settings to make it work with Internet Explorer, but every time we solve one problem another pops up. We are getting closer though. During the Thanksgiving break, we discovered a file that was being updated automatically and was contributing to a lot of the problems. Work is continuing, but we're optimistic now that we're close to a solution.

A similar discovery has been made with regards to MAP testing. Some of the 1:1 laptops do not have all of the files they should. It's sporadic, and we don't know why yet, but the important thing is that it's been identified so now we can search for solutions.

New Dell laptops have been rolled out to all teachers. They are lighter, faster, and have better batteries. As with all new laptops now, they do

not have a DVD drive. 10 external DVD drives were purchased to be shared throughout the building until other sources of video content are found. We encourage everyone to continue searching the Internet for video resources.

The new laptops have better screens than the old ones, which is normally a good thing. It does present a challenge however. When projecting, the image needs to be adjusted. This is a normal part of getting new technology. In most cases, we've found that lowering the resolution to 1366 X 768 helps, particularly with regards to Promethean flipcharts. Mike Swartley sent an email with screenshots on how to do that. There also have been a couple of old boards which have failed. As a District, we are evaluating what type of presentation technology we will move to.



XLab at work

"New Dell laptops have been rolled out to all teachers. They are lighter, faster, and have better batteries."

UPSD-Staff Wifi Password Change

Students at the High School learned the UPSD-Staff Wifi password. They then passed it around to their friends, and within a few days everyone knew it. So many student devices were connected to UPSD-Staff that the cafeteria lines crashed!

As a first line of defense, we blocked all unknown devices from connecting at the High School. That had the side-effect of preventing some teacher iPads and other devices from connecting.

At the faculty meeting on

November 28, we change the UPSD-Staff Wifi password at the High School. We will have to do that at all of the other schools too.

Once again, this highlights the need for better password security.

