



Upper Perk Tech Pulse

Construction Work

Inside this issue:

New Tech Assistants	2
Software Upgrade on Storage System	2
Copier / Printer Contract Renewal	3
Elementary Teacher Laptops	3
High School Intercom System	3

The Technology Department has been hard at work on the construction projects over the past few months, and we're just now getting to the point where we are starting to install things in the Middle School.

When a new school is built, there is a tremendous amount of planning and coordination work that has to be done to make sure that the installations go well. Before the project was even put out to bid, we had to plan the locations of network jacks, wireless access points, printers, projectors, and other items. Based on those locations, we had to plan where to locate the network closets and how large they needed to be.

The project is now at the point that we are working daily with the electrical contractor to ensure everything ties together. We installed an interactive projector in a classroom to use as a template for the rest of the installations, we finalized the power requirements and types of receptacles that we need in the network closets, and many other details.

All of the air systems, pumps, chillers, and other mechanical

systems are computerized now, so we are coordinating with those contractors to connect to the network. Even though the building still has areas open to the elements, we are working on those connections now.

There are a lot of third party contractors that we need to coordinate too. On Monday April 15, Verizon is installing phone lines so we can connect the elevator, fire alarm, and other emergency systems when they are ready. Crown Castle (our Wide-Area-Network provider) has just finished their drawings of the fiber optic installation from the utility poles on Montgomery Avenue into the building. We are working with network engineers and vendors to plan and purchase the network switches and wireless access points that will provide all of the connectivity for the students and staff.

This list isn't complete, but hopefully it gives a sense of the work that is being done largely behind the scenes to get everything ready. It is going to be a wonderful instructional facility when everything is finished.



New Tech Assistants

In March, the Middle School Technology Assistant, Lorraine Carawan, moved on to an exciting new opportunity in New Jersey. After interviewing many qualified candidates to replace Lorraine, the team determined that the best candidate was one of our own, Janet Fritz!

Janet was at Hereford for many years, and has filled in at the Middle School during several vacancies there. She impressed everyone with her positive attitude, customer service skills, and technical abilities. We are thrilled to have Janet full time at the Middle School, especially in light of all of the work we

need to do this summer to move to the new building.

Janet has been working at the Middle School for several weeks now. Promoting Janet left a vacancy at Hereford Elementary. Janet has been working very hard to cover both schools but Hereford needs its own Tech Assistant.

At the Board Meeting on April 11, Charity Kutt was appointed the new Hereford Tech Assistant. Charity currently works as a clerk at the Chester County Courthouse. Prior to that she was a tech assistant at Twin Valley School District. She has experience working with young

children, so we are confident that Charity will be a great addition to Hereford Elementary. Charity's start date is still pending, so in the meantime Janet will continue to cover Hereford.

All of this still leaves the question of coverage for the 4/5 building. Nothing is finalized yet, but there are a couple of options on the table. We will either hire a new Tech Assistant or ask the current staff to cover it. We are probably going to hire, but that will have budget implications so we can't commit to anything right now.

"At the Board Meeting on April 11, Charity Kutt was appointed the new Hereford Tech Assistant."

Software Upgrade on Storage System

On the weekend of March 8-10, we upgraded the software and firmware on our storage system and server hardware.

The upgrade was required by the manufacturers. Hardware and software companies typically support products and versions for a finite amount of time so they don't have to devote resources to supporting old products. In the case of our storage and servers, support for them would have ended this summer. The upgraded versions will be supported for another 2 years.

The upgrade process on the server hardware was relatively straight forward. We did run into a problem on the night of March 8 in which some of the servers got stuck at a certain step but we were able to resolve that with the help of Cisco and keep going forward.

The storage system upgrade was more complex, but fortunately

we didn't run into any errors or problems with that. We did run across a couple of odd warnings that we had to talk to the manufacturer to resolve but they were all minor. The bulk of Saturday March 9 was devoted to the storage system. We thought we might need March 10 as well, but we were able to finish everything ahead of schedule, so we were up and running by the afternoon of March 9.

Scheduling this kind of work is always a challenge. Almost all of the operations of any organization is highly dependent upon their technology functioning, so there is never a good time to take systems down. However, if we don't take them down and perform these upgrades periodically, then we end up in a situation in which we cannot get help to fix them when they fail.

In the case of this upgrade, we had to schedule our own availa-

bility, engineers to perform the upgrades, manufacturers to be on standby for the inevitable snags along the way, and the vendor we purchased the equipment from to give us the proper license codes when we needed them. The only times that all of those resources could be assembled together outside of standard school hours were the weekends of March 8-10 and 15-17. We discussed those weekends with the admin team and collectively determined that March 15-17 wasn't feasible because report cards were due right after. Although March 8-10 wasn't ideal, it was the best of the options.

There is other equipment that needs similar upgrades in the near future, so we are going to have to take the network offline again in the summer. That will be a shorter duration outage and we will have more flexibility with it.

"In the case of our storage and servers, support for them would have ended this summer."

Copier / Printer Contract Renewal

As part of the building moves, we know we have to put copiers in the new Middle School and rearrange others as a result of 4th and 5th grades moving. We met with Edwards to discuss the logistics of that in February. Since we lease our copiers and many of them are quite large and heavy, we have to pay Edwards to disassemble, pack, and move them for us.

We also inquired about additional features that we would like to see on our copiers such as scanning to our H drives and

Google Drives, optical character recognition when scanning, and having a more consistent interface on all of our units.

As the conversation progressed, it became clear that our current copier fleet cannot support the new features without upgrading their internals which would have a cost, and we would still have old machines. Additionally, moving the number of copiers we need to move will cost in the thousands. With that in mind, Edwards said they might be able to renew our contract

early, get us all new copiers, and take the old units all for a lower cost than we are paying now.

After running the calculations, that all turned out to be true. We are able to get new units with more features for a little less money than we are spending now. The contract renewal will be recommended to the School Board for approval in May.



Elementary Teacher Laptops

The laptops that the elementary teachers have now are 5 years old. They are suffering from all of the usual ailments of worn-out technology: poor battery life, nonfunctional keys, slow startup, etc.

We wanted to purchase new laptops in the summer, but with the workload we will have trying to get everything else ready, we knew we wouldn't be able to set them up in time for the start of school. Therefore, we moved some things around and were able to scrape together enough funds to purchase them

in April. We plan to work on them in the spring with the goal of distributing them before the end of this school year.

Last week, all of the new laptops arrived. We're working on getting them in inventory and soon we'll be able to start imaging them to get their software installed. We are on track to distribute them in late May and early June.

For those of you who are into this sort of thing, the laptops are Dell Latitude 5590. They have Intel i5 processors, 8 GB

of RAM, and 256 GB solid state drives. In other words, they are really nice.

In addition to all of the elementary teachers in grades K-5, we are also replacing the laptops of all of the specialists, special education, and learning support staff. Basically, if you are in Hereford or Marlborough right now and you have an old HP laptop, then you will be getting a new laptop.

We will develop a roll out schedule and communicate it when are closer to being ready.



High School Intercom System

During ALICE training, it became evident that the High School classrooms do not have the ability to do a building-wide announcement through the intercom system.

Upon investigation, we learned that the intercom system (which also handles the bell schedule) has not been replaced since

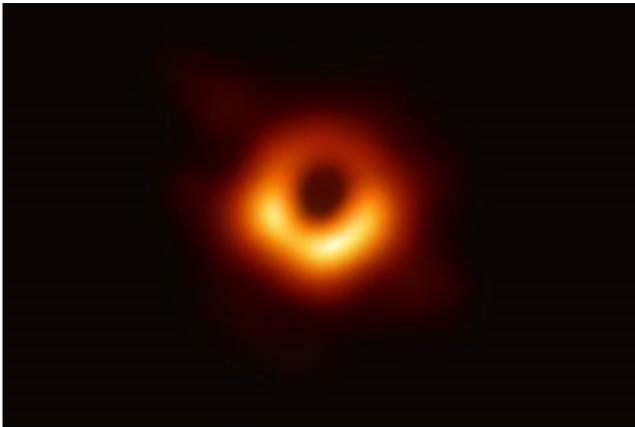
2000. It is basically too old to be able to tie our phone system into it.

The Facilities Department is working on getting quotes to upgrade the system. Upgrading the intercom system is a complex and expensive project. While Facilities explores the upgrade, the Technology De-

partment is looking into any possibilities of retro-fitting it to work with our phone system.

The cost, logistics, and general feasibility of upgrading the system and tying the phones into it will be discussed at the Facilities Committee Meeting on Wednesday, April 17.

“While Facilities explores the upgrade, the Technology Department is looking into any possibilities of retro-fitting it to work with our phone system.”



Did you know?

The image of a black hole released by NASA on April 10 took 5 petabytes of data to assemble. 1 petabyte is 1 million gigabytes. There was so much data that scientists had to store it on hard drives and FedEx them to a central location. 5 petabytes is the equivalent of about 80,000 iPhones!

UPPER PERKIOMEN SCHOOL DISTRICT

Director of Technology—Bryan Ruzenski
bruzenski@upsd.org
Twitter [@BryanRuzenski](https://twitter.com/BryanRuzenski)

Network & Systems Coordinator—
Mark Lewandowski
slewandowski@upsd.org

Software Coordinator—
Barb Eisenhauer
beisenhauer@upsd.org

Hereford Technology Assistant—
Pending

High School Technology Assistant—
Mike Swartley
mswartley@upsd.org

Marlborough Technology Assistant—
Marianne Phillips
mphilips@upsd.org

Middle School Technology Assistant—
Janet Fritz
jfritz@upsd.org

The Upper Perkiomen School District is committed to the effective use of technology to support student achievement. The Technology Department supports an environment in which students have equitable access to information, tools, and applications to engage in meaningful learning.

The Technology Department supports all aspects of information technology, including Internet connectivity, wireless networking, various databases and servers, the phone system, and the software and devices used every day. UPSD has over 3,000 devices connected to the network, which all require maintenance and support. In addition, each classroom has a projector and interactive whiteboard. Some of the applications which the Technology Department supports include Skyward Student Information System, Skyward Business System, Microsoft Windows, Microsoft Office, Google Chrome OS, Adobe Creative Cloud, and Apple iOS, as well as many different cloud applications.